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UPOV

INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

GENEVA

Associated Document
to the
General Introduction to the Examination
of Distinctness, Uniformity and Stability and the
Development of Harmonized Descriptions of New Varieties of Plants (document TG/1/3)

DEVELOPMENT OF TEST GUIDELINES

SECTION 1: INTRODUCTION

1.1 UPOV Test Guidelines as the Basis for the DUS Test

The General Introduction (Chapter 2, section 2.2.1) states that "Where UPOV has established specific Test Guidelines for a particular species, or other group(s) of varieties, these represent an agreed and harmonized approach for the examination of new varieties and, in conjunction with the basic principles contained in the General Introduction, should form the basis of the DUS test." It further states in Chapter 8, section 8.2.1, that "The individual Test Guidelines are prepared or, where appropriate, revised according to the procedures set out in document TGP/7, Development of Test Guidelines". Thus, the purpose of this document is to provide guidance on the development of these UPOV Test Guidelines ("Test Guidelines").

1.2 Individual Authorities' Test Guidelines

The General Introduction also states that "Where UPOV has not established individual Test Guidelines relevant to the variety to be examined, the examination should be carried out in accordance with the principles in this document and, in particular, the recommendations contained in Chapter 9, Conduct of DUS Testing in the Absence of Test Guidelines. In particular, the recommendations in Chapter 9 are based on the approach whereby, in the absence of Test Guidelines, the DUS examiner proceeds in the same general way as if developing new Test Guidelines." Thus, in the absence of Test Guidelines, this document is also aimed at the drafters of individual authorities' test guidelines.

1.3 Structure of TGP/7

This document is structured in the following way:

Section 1: Introduction (this section)

Section 2: Procedure for the Introduction and Revision of UPOV Test Guidelines

Section 3: Guidance for Drafting Test Guidelines

3.1 The TG Template

This section introduces the "TG Template" which provides the basic Test Guidelines structure and also the *universal* standard wording which is currently considered to be *appropriate for all Test Guidelines*. The TG Template itself is provided as Annex 1 of this document.

3.2 Additional Standard Wording (ASW) for the TG Template

The "TG Template" contains the *universal* standard wording which is currently considered to be appropriate for all Test Guidelines. However, this section explains that UPOV has developed *additional* standard wording (ASW) which should be used, where appropriate, for the Test Guidelines concerned. The additional standard wording is provided in Annex 2 of this document.

3.3 Guidance Notes (GN) for the TG Template

There are many aspects of the Test Guidelines where the individual drafter's experience and knowledge are needed for preparing the Test Guidelines. This includes, for example, the selection of appropriate ASW, trial design, the identification of characteristics and selection of example varieties. The purpose of this section is to provide guidance notes on how to proceed in a harmonized way for such aspects. These guidance notes are presented in Annex 3 of this document and include guidance on the use of the collection of approved characteristics presented in Annex 4 (see GN 17).

Annex 1: The TG Template

Annex 2: Additional Standard Wording (ASW) for the TG Template

Annex 3: Guidance Notes (GN) for the TG Template

Annex 4: Collection of Approved Characteristics

SECTION 2: PROCEDURE FOR THE INTRODUCTION AND REVISION OF UPOV TEST GUIDELINES

2.1 Introduction

2.1.1 The General Introduction (Chapter 1, Section 1.4) explains that the individual Test Guidelines are prepared by the appropriate Technical Working Party, which is composed of government-appointed experts from each member of the Union with invited experts from other interested States and observer organizations. The involvement, as observer organizations, of the main international non-governmental organizations in the field of plant breeding and the seed and plant industries ensures that the knowledge and experience of breeders and the seed and plant industries are taken into account. Once developed, the Test Guidelines are submitted for approval by the Technical Committee.

2.1.2 To facilitate its work, the Technical Committee has established the Enlarged Editorial Committee (TC-EDC) which examines drafts of all Test Guidelines, produced by the Technical Working Parties, and makes recommendations before these are put forward for adoption by the Technical Committee.

2.1.3 Transparency and Responsibility

This section has been developed in recognition of the need to ensure that the procedure for the introduction and revision of Test Guidelines is transparent and to clarify responsibility for each step in the procedure.

2.1.4 Leading Expert

The procedure recognizes that the drafting of Test Guidelines is led by an expert or experts (referred to as the “leading expert” in this document) from within one of the UPOV Technical Working Parties (“the TWPs”).

2.1.5 Interested Experts

The leading expert drafts the Test Guidelines in close cooperation with all those experts of the TWPs who have expressed an interest (the “interested experts”), to ensure that the full extent of knowledge and expertise is reflected in the draft.

2.1.6 Consultation

2.1.6.1 The drafts of Test Guidelines, prepared by the leading expert in conjunction with the interested experts, are considered at the relevant TWP meetings before submission to the Technical Committee for approval. This procedure involves the main international non-governmental organizations in the field of plant breeding and genetic resource management, by means of their invitation to participate in the meetings of the relevant TWPs and Technical Committee as observers.

2.1.6.2 In addition, the relevant TWP may enhance the consultation of interested experts for certain Test Guidelines by the arrangement of Test Guidelines Subgroup meetings, to be held, for example, at UPOV Regional Technical Meetings.

2.2 Procedure for the Introduction of Test Guidelines

2.2.1 STEP 1 Proposals for the Commissioning of Work

The Technical Committee is responsible for the commissioning of any work concerning Test Guidelines. Proposals for the commissioning of work by the Technical Committee can be made:

(a) by a UPOV body

Most Test Guidelines are commissioned on the basis of proposals from a TWP, but may also be proposed by the Technical Committee itself, the Council, the Consultative Committee or the Administrative and Legal Committee (hereinafter referred to as "the CAJ").

(b) directly to the Technical Committee by a member of the Union;

(c) directly to the Technical Committee by an observer State or observer organization to the Technical Committee.

2.2.2 STEP 2 Approval of the Proposals

2.2.2.1 The purpose of Test Guidelines is to elaborate the principles contained in the General Introduction, and its associated TGP documents, into detailed practical guidance for the harmonized examination of DUS and, in particular, to identify appropriate characteristics for the examination of DUS and production of harmonized variety descriptions. In the case of species or crops which are only of interest at a national or local level and where international harmonization is not necessary, the development of Test Guidelines may be of low priority. For such situations, UPOV still provides effective guidance for developing a robust DUS examination by means of the General Introduction and, in particular, documents TGP/7, Development of Test Guidelines, which is aimed at drafters of both (UPOV) Test Guidelines and national test guidelines, and TGP/13, Guidance Notes for New Types and Species.

2.2.2.2 In recognition of the importance of international harmonization, the Technical Committee will take into account the following factors when considering and prioritizing the commissioning of Test Guidelines:

(a) Total number of applications for plant breeders rights within the territories of the members of the Union.

The Technical Committee is unlikely to prioritize Test Guidelines where there are very few applications, unless certain other factors make this appropriate e.g. it is known that there is an intensive breeding effort in progress at the international level (see (e)).

(b) Number of authorities receiving applications for the varieties which would be covered by the Test Guidelines.

In general, Test Guidelines where only one or two authorities are receiving applications would not normally be given a high priority.

(c) Number of foreign applications received by members of the Union.

A high level of foreign applications indicates that international harmonization is important.

(d) Economic importance of the crop/species.

(e) The level of breeding activity.

It may be important to know if the number of new varieties is likely to increase, or decrease significantly

(f) Any other factors considered relevant by the Technical Committee.

2.2.2.3 The proposer should provide as much information as possible concerning these factors.

2.2.3 STEP 3 Allocation of Drafting Work

2.2.3.1 The Technical Committee will decide which Technical Working Party or Parties should be responsible for the drafting of the Test Guidelines in question. In general, where the proposal is made by a TWP, the Technical Committee will commission the work from that same TWP, but it may decide to request the approval of another TWP before a draft is submitted for adoption.

2.2.3.2 In cases where more than one TWP has proposed the development of Test Guidelines with the same coverage, the Technical Committee will decide which TWP should be responsible for the drafting of the Test Guidelines. This will be decided on the basis of the level of expertise in the TWPs concerned. In such cases, the Technical Committee will request the approval of all other interested TWPs before a draft is submitted for adoption.

2.2.3.3 Information on proposals for the drafting of Test Guidelines by the TWPs is presented in document TC/[Session reference]/2.

2.2.4 STEP 4 Preparation of Draft Test Guidelines for the Technical Working Party

2.2.4.1 The Leading Expert

The TWP will agree on a leading expert who will be responsible for preparing all drafts of the Test Guidelines until a document is agreed by the TWP.

2.2.4.2 The Subgroup of Interested Experts

The TWP will establish a subgroup consisting of the leading expert and the other interested experts wishing to participate in the drafting of the Test Guidelines in question. For the purpose of this document, the term “subgroup” also applies where the interested experts comprise all the experts in the TWP concerned.

2.2.4.3 Preliminary Work on Draft Test Guidelines

Pending the commissioning of the work by the Technical Committee, the TWP may establish the subgroup (see 2.2.4.2) and preliminary work on the preparation of the Test Guidelines may commence.

2.2.4.4 Preparation of the Draft(s) by the Leading Expert with the Subgroup

The leading expert should, after consulting the members of the subgroup, establish a first draft. This draft is sent to the Office of the Union (Office) which will check, as far as possible, that the draft has been prepared according to document TGP/7 and, in particular, that it conforms with the TG/Template (Annex 1). Thereafter, it will produce a document for distribution to the members of the TWP(s) concerned for discussion at their session(s). In the case of Test Guidelines which have been considered by the relevant TWP(s) (Step 5) and where the responsible TWP has requested amendment of the draft, the leading expert should, after consulting the members of the subgroup, establish a further draft for consideration at the following TWP meeting in the manner explained above.

2.2.4.5 Subgroup Meetings

The relevant TWP may enhance the consultation of interested experts for certain Test Guidelines by the arrangement of Test Guidelines Subgroup meetings. These Subgroup meetings may be held in conjunction with other UPOV meetings, for example at UPOV Regional Technical Meetings, or may be organized as a separate meeting, with or without the Office being present. The leading expert takes the results of the discussions in the Subgroup meeting into account when preparing a new draft of the Test Guidelines for consideration by the TWP.

2.2.4.6 Exchange of Plant Material

Where appropriate, the leading expert may arrange an exchange of plant material of representative varieties in order to develop suitable grouping and asterisked characteristics.

2.2.5 STEP 5 Consideration of the Draft Test Guidelines by the Technical Working Parties

2.2.5.1 Draft Test Guidelines developed by a single Technical Working Party

The TWP decides if the draft is ready for submission to the Technical Committee (Step 6) for adoption, or whether it should be revised and re-presented at a subsequent session of the TWP (Step 4).

2.2.5.2 Draft Test Guidelines developed jointly by more than one Technical Working Party

Where more than one TWP is involved in drafting particular Test Guidelines, the leading TWP is the one from which the leading expert derives. The leading TWP will decide at what stage to send it to the other interested TWPs for comment. The comments from the other TWPs will be reported to the leading expert. The leading expert, in consultation with the other interested experts will then develop a revised draft for submission to all interested TWPs. Only when all interested TWPs have agreed will the draft be submitted to the Technical Committee.

2.2.5.3 Requirements for "final" draft Test Guidelines

The elements set out in this section only apply to those Test Guidelines which the TWP may decide are ready to submit to the Technical Committee ("final" draft Test Guidelines) and do not apply to Test Guidelines where further drafts are to be developed for discussion in subsequent sessions of the TWP. In order for the TWP to be able to agree to submit draft Test Guidelines to the Technical Committee, there are certain elements in their preparation which should, in general, be met. Thus, the TWP will, in general, only consider the submission of Test Guidelines to the Technical Committee where a "complete" draft has been issued to the members of the TWP concerned, by the Office of the Union, four weeks prior to the TWP session. The deadline for receipt of "final" draft Test Guidelines from the leading expert, by the Office, in order to meet this deadline, is to be set by the Office in conjunction with the Chairperson of the TWP concerned. A draft would be considered to be "complete" if there was no missing information from any chapter of the Test Guidelines. Thus, it should include, for example, explanations of characteristics contained in the Table of Characteristics and an appropriate set of example varieties. Where the TWP amends the "complete" draft at its session, the amendments are to be specified and approved in a report of the meeting (i.e. the report on the conclusions or detailed report), and the Test Guidelines are submitted to the Technical Committee on this basis.

2.2.6 STEP 6 Submission of Draft Test Guidelines by the Technical Working Party

2.2.6.1 Once the TWP has agreed to submit particular draft Test Guidelines to the Technical Committee, the Office will prepare the necessary documents in all the UPOV languages (see also 2.2.6.2). Where the TWP has specified amendments to be made to the draft prior to submission to the Technical Committee (which will be recorded in a report of the TWP session), the Office will, if necessary in consultation with the leading expert and Chairperson of the TWP, be responsible for incorporating these amendments. Where the amendments requested by the TWP require further information to be provided to the Office by the leading expert, this should be provided within six weeks of the TWP session, or according to a deadline agreed by the chairperson of the TWP in conjunction with the Office. If specified by the TWP, this information must first be agreed by all interested experts. In general, if the leading expert is unable to provide the agreed information within the specified deadline, the Test Guidelines would be re-presented at the following TWP session (Step 4). After translation into all the UPOV languages, the Test Guidelines are issued, by the Office, to members of, and observers to, the Technical Committee. In general, the Test Guidelines are to be issued at least four weeks prior to the relevant session of the Technical Committee.

2.2.6.2 If, for any reason, it is not possible for all draft Test Guidelines to be translated prior to the relevant session of the TC, the TC-EDC will recommend to the TC the order of priority on the basis of the factors identified in Section 2.2.2.2 and the amount of translation work required for each of the Test Guidelines. Draft Test Guidelines which are not translated will resume from Step 6 for the following session.

2.2.7 STEP 7 Consideration of Draft Test Guidelines by the TC-EDC

2.2.7.1 The TC-EDC has been established by the Technical Committee to examine drafts of all Test Guidelines, produced by the TWPs, before these are put forward for adoption by the Technical Committee. The role of the TC-EDC is to ensure consistency of the Test Guidelines with the requirements of document TGP/7 and to check the alignment of texts across all the official UPOV languages. It does not conduct a substantive technical review of

the Test Guidelines. The members of the TC-EDC are selected by the TC, both to provide broad experience of the UPOV system and also to represent the UPOV languages – English, French, German and Spanish. The chairperson of the TC-EDC is provided by the UPOV Secretariat.

2.2.7.2 The TC-EDC reviews the draft Test Guidelines, taking into account any specific instructions from the Technical Committee, and makes a recommendation on whether the Test Guidelines are suitable for adoption (Step 8). It may make a proposal to the Technical Committee for adoption subject to amendments of an editorial nature, which it specifies.

2.2.7.3 If it considers that there are technical issues to be resolved, the TC-EDC may seek to resolve the issues with the leading expert, prior to consideration of the Test Guidelines by the Technical Committee. Where this is not possible, the TC-EDC may recommend that the Technical Committee:

(a) refer the Test Guidelines back to the TWP (Step 4) or,

(b) adopt the Test Guidelines subject to further information being provided by the leading expert with the agreement of all interested experts and the Chairman of the TWP concerned.

2.2.8 STEP 8 Adoption of Draft Test Guidelines by the Technical Committee

2.2.8.1 The Technical Committee will, on the basis of the recommendations of the TC-EDC, decide whether to adopt the Test Guidelines, or refer them back to the TWP concerned.

2.2.8.2 Where the Technical Committee adopts the Test Guidelines, the Office will make all amendments agreed by the Technical Committee, which will be recorded in a report of the relevant Technical Committee meeting. The Office will then publish the adopted Test Guidelines.

2.2.8.3 Where the Technical Committee adopts the Test Guidelines subject to further information being provided by the leading expert with the agreement of all interested experts and the Chairman of the TWP concerned (see 2.2.7.3(b)), the necessary information, agreed with all interested experts, should be provided to the Office of the Union within three months of the Technical Committee meeting, or before the subsequent session of the TWP concerned, whichever is the sooner. In those cases where the necessary information is not provided within this time, the Test Guidelines concerned will not be adopted and will be re-presented at the TWP concerned (Step 4).

2.3 Procedure for the Revision of Test Guidelines

2.3.1 Need for revision of Test Guidelines

Developments in plant breeding and variety production may result in a need to revise the existing Test Guidelines. For example, there may be a need to update the:

(a) Table of Characteristics; and/or
(b) Example varieties

2.3.2 Full Revision

Where there is a need to update the Test Guidelines in a comprehensive way, for example to update the Table of Characteristics, a "full revision" is undertaken and the procedure is the same as for the introduction of new Test Guidelines as set out in Section 2.2.

2.3.3 Partial Revision

Where it is appropriate to update only a specific part of the Test Guidelines without undertaking a comprehensive review of the entire Test Guidelines, a "partial revision" is undertaken. The procedure for a partial revision is the same as that set out in Section 2.2, except that the considerations will be restricted to the elements of the Test Guidelines being revised. In particular, the other factors included as (f) in Section 2.2.2.2 would include that the work involved in this kind of revision would be considerably less than a full revision. The Technical Committee will decide on the specific aspects of the Test Guidelines which are to be revised when it commissions the work (Step 2).

2.4 Procedure for the Correction of Test Guidelines

Where appropriate, the Technical Committee may approve factual corrections to adopted Test Guidelines. These corrected Test Guidelines will be shown with "Corr." after the TG reference.

2.5 Document References

2.5.1 TG Reference

All adopted Test Guidelines receive a reference constructed as follows:

TG / [sequential number allocated to the TG - fixed] / [version number – updated at adoption]
e.g. TG/100/6

2.5.2 Introduction of New Test Guidelines

2.5.2.1 This section explains how the document references are developed for draft Test Guidelines on the basis of the following example:

Coverage of Test Guidelines: *Plantus magnifica* L. (Common name: Alpha)
Technical Working Party: TWX

2.5.2.2 At the point of proposing/commissioning of draft Test Guidelines they are given a simple short reference by the TWP/Technical Committee based on the botanical or common name, according to which is considered the most appropriate reference. This reference is used only as a code and is based on the botanical or common name as a means of aiding recognition.

Example 1:

Draft to TWX (2005):	Alpha proj.1
Draft to TWX (2006):	Alpha proj.2
Draft to Technical Committee (2007):	Alpha proj.3
Final adopted document:	TG/500/1

Example 2:

Draft to TWX (2005):	Alpha proj.1
Draft to TWX (2006):	Alpha proj.2
Draft to TWX Subgroup Meeting (2006) (e.g. at UPOV Regional Technical Meeting):	Alpha proj.3
Draft to TWX (2007):	Alpha proj.4
Draft to Technical Committee (2008):	Alpha proj.5
Final adopted document:	TG/500/1

2.5.2.3 Thus, the progress of the document can be easily followed and versions can be produced for other TWPs and UPOV meetings and if the Test Guidelines are not put forward for adoption, the sequence of TG references is not affected.

2.5.3 Full Revision of Test Guidelines

Where existing Test Guidelines are to be fully revised, different circumstances can arise. For example, the revised Test Guidelines may be a straightforward replacement of the existing Test Guidelines or the original Test Guidelines may need to be split into two or more Test Guidelines. The document references for these two particular situations are explained below using the following starting point:

Coverage of Test Guidelines:	*Plantus magnifica* L. (Common name: Alpha)
Test Guidelines Reference:	TG/500/1
Technical Working Party:	TWX

2.5.3.1 Replacement of Existing Test Guidelines

In a case where TG/500/1 is being updated without any change to the coverage of the Test Guidelines, the document references would be, for example, as follows:

Example 1:

Draft to TWX (2005):	TG/500/2 proj.1
Draft to TWX (2006):	TG/500/2 proj.2
Draft to Technical Committee (2007):	TG/500/2 proj.3
Final adopted document:	TG/500/2

Example 2:

Draft to TWX (2005):	TG/500/2 proj.1
Draft to TWX (2006):	TG/500/2 proj.2
Draft to TWX Subgroup Meeting (2006) (e.g. at UPOV Regional Technical Meeting):	TG/500/2 proj.3
Draft to TWX (2007):	TG/500/2 proj.4
Draft to Technical Committee (2008):	TG/500/2 proj.5
Final adopted document:	TG/500/2

2.5.3.2 Splitting of Existing Test Guidelines

In a case where the existing Test Guidelines are to be split – for example, into *Plantus magnifica* L. *major* and *Plantus magnifica* L. *minor* - the Technical Committee would decide on which type retains the TG/500 reference. If *Plantus magnifica* L. *major* retained the reference TG/500, it would be handled in exactly the same way as in 2.5.3.1, i.e. it would become TG/500/2. *Plantus magnifica* L. *minor* would be handled as a new document of Test Guidelines according to 2.5.3 and would become TG/xxx/1.

2.5.4 Partial Revision of Test Guidelines

In the case of Test Guidelines being only partly revised this would be indicated by the addition of "Rev."

Example 1:

Draft to TWX (2005):	TG/500/1 Rev. proj.1
Draft to TWX (2006):	TG/500/1 Rev. proj.2
Draft to Technical Committee (2007):	TG/500/1 Rev. proj.3
Final adopted document:	TG/500/1 Rev.

Example 2:

Draft to TWX (2005):	TG/500/1 Rev. proj.1
Draft to TWX (2006):	TG/500/1 Rev. proj.2
Draft to TWX Subgroup Meeting (2006) (e.g. at UPOV Regional Technical Meeting):	TG/500/1 Rev. proj.3
Draft to TWX (2007):	TG/500/1 Rev. proj.4
Draft to Technical Committee (2008):	TG/500/1 Rev. proj.5
Final adopted document:	TG/500/1 Rev.

2.5.5 Corrections to Test Guidelines

In the case of a correction to the Test Guidelines, this would be indicated by the addition of "Corr.", "Corr. 2", etc.

Example:

Starting version	TG/500/1
Corrected version	TG/500/1 Corr.

SECTION 3: GUIDANCE FOR DRAFTING TEST GUIDELINES

3.1 The TG Template

3.1.1 UPOV has developed a template (the "TG Template") containing the universal standard wording which is appropriate for all UPOV Test Guidelines ("Test Guidelines") and which is prepared in the appropriate format. The TG Template is presented in Annex 1 and should be used as the starting point for the development or revision of all Test Guidelines.

3.1.2 In addition to the TG Template, further guidance is provided for drafters of Test Guidelines on how to develop individual Test Guidelines from the TG Template. This is provided by means of additional standard wording (ASW) and guidance notes (GN) and indications are provided within the TG Template on where this further guidance is available (see Sections 3.2 and 3.3).

3.2 Additional Standard Wording (ASW) for the TG Template

3.2.1 As explained above, the TG Template contains the universal standard wording which is appropriate for all Test Guidelines. However, UPOV has developed additional standard wording which should be used, where appropriate, for the Test Guidelines concerned. For example, for Test Guidelines where the material is supplied in the form of seed, there is standard wording concerning the quality of the seed to be supplied. Of course, this standard wording for seed should not be included in Test Guidelines where, for example, the material is to be provided as tubers and for this reason such additional standard wording is not included in the TG Template. The additional standard wording is presented in Annex 2, Additional Standard Wording (ASW) for the TG Template.

3.2.2 Where such additional standard wording is available, an insert is highlighted in the TG Template at the appropriate location, e.g.

{**ASW 1** (TG Template: Chapter 2.3) – seed quality requirements}

3.3 Guidance Notes (GN) for the TG Template

3.3.1 There are many aspects of the Test Guidelines where the individual drafter's experience and knowledge are needed for preparing the Test Guidelines. This includes, for example, the selection of appropriate ASW, trial design, the identification of characteristics and the selection of example varieties. In such situations general guidance on how to proceed in a harmonized way, in line with the experience accumulated by UPOV through the crop experts, is provided by a series of guidance notes presented in Annex 3, Guidance Notes (GN) for the TG Template.

3.3.2 Where such guidance is available for drafters, an insert is highlighted in the TG Template at the appropriate location, e.g.

{GN 5 (TG Template: Chapter 1.1) – Subject of the Test Guidelines: Family Name}

[Annex 1 follows]

ANNEX 1:

TG TEMPLATE

E

TG/{xx}
ORIGINAL: {xx}
DATE: {xx}

UPOV

INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

GENEVA

DRAFT

{MAIN COMMON NAME} *

([types of] botanical name)

(UPOV Code)

{ GN 1 (Cover page) – 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 [xxx] at its [xxx] session,
to be held in [xxx] from [xxx}

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/1/3), and its associated TGP 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.

* 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.]

ASSOCIATED DOCUMENTS

These Test Guidelines should be read in conjunction with the General Introduction and its associated TGP documents.

Other associated UPOV documents: { GN 2 (Cover page) – Associated Documents }

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1. Subject of these Test Guidelines

These Test Guidelines apply to all varieties of

{ GN 3 (Chapter 1.1) – Subject of the Test Guidelines: More than one species}
{ GN 4 (Chapter 1.1) – Subject of the Test Guidelines: Different types or groups within a species}
{ GN 5 (Chapter 1.1) – Subject of the Test Guidelines: Family name}
{ GN 6 (Chapter 1.1) – Guidance for New Types and Species}

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 {xx}.

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

{ GN 7 (Chapter 2.3) – quantity of plant material required }
{ **ASW 1** (Chapter 2.3) – seed quality requirements }

2.4 The plant material supplied should be visibly healthy, not lacking in vigor, nor affected by any important pest or disease.

2.5 The plant material should not have undergone any treatment which would affect the expression of the characteristics of the variety, unless the competent authorities allow or request such treatment. If it has been treated, full details of the treatment must be given.

3. Method of Examination

3.1 Number of Growing Cycles

The minimum duration of tests should normally be:

{ **ASW 2** (Chapter 3.1(.1)) –number of growing cycles }
{ GN 8 (Chapter 3.1.2) – explanation of the growing cycle }
{ **ASW 3** (Chapter 3.1.2) –explanation of the growing cycle (fruit species) }

3.2 Testing Place

Tests are normally conducted at one place. In the case of tests conducted at more than one place, guidance is provided in TGP/9 "Examining Distinctness".

3.3 Conditions for Conducting the Examination

The tests should be carried out under conditions ensuring satisfactory growth for the expression of the relevant characteristics of the variety and for the conduct of the examination.

{ **ASW 4** (Chapter 3.3) – conditions for conducting the examination }

{ GN 9 (Chapter 3.3) – requirements for a satisfactory growing cycle }

3.4 Test Design

{ GN 10 (Chapter 3.4) – test design }

{ **ASW 5** (Chapter 3.4) – plot design }

{ **ASW 6** (Chapter 3.4) – removal of plants or parts of plants }

3.5 Number of Plants / Parts of Plants to be Examined

{ **ASW 7** (Chapter 3.5) – Number of Plants / Parts of Plants to be Examined }

3.6 Additional Tests

Additional tests, for examining relevant characteristics, may be established.

4. Assessment of Distinctness, Uniformity and Stability

4.1 Distinctness

4.1.1 General Recommendations

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

4.1.2 Consistent Differences

The differences observed between varieties may be so clear that more than one growing cycle is not necessary. In addition, in some circumstances, the influence of the environment is not such that more than a single growing cycle is required to provide assurance that the differences observed between varieties are sufficiently consistent. One means of ensuring that a difference in a characteristic, observed in a growing trial, is sufficiently consistent is to examine the characteristic in at least two independent growing cycles.

4.1.3 Clear Differences

Determining whether a difference between two varieties is clear depends on many factors, and should consider, in particular, the type of expression of the characteristic being examined, i.e. whether it is expressed in a qualitative, quantitative, or pseudo-qualitative manner. Therefore, it is important that users of these Test Guidelines are familiar with the recommendations contained in the General Introduction prior to making decisions regarding distinctness.

4.2 Uniformity

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:

{ GN 11 (Chapter 4.2) – uniformity assessment }
{ **ASW 8** (Chapter 4.2) –uniformity assessment }

4.3 Stability

4.3.1 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, experience has demonstrated that, for many types of variety, when a variety has been shown to be uniform, it can also be considered to be stable.

4.3.2 { **ASW 9** (Chapter 4.3.2) – stability assessment: general}

4.3.3 { **ASW 10** (Chapter 4.3.3) – stability assessment: hybrid varieties }

5. Grouping of Varieties and Organization of the Growing Trial

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

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

5.3 The following have been agreed as useful grouping characteristics:

{ GN 13.2, 13.4 (Chapter 5.3) – Grouping characteristics }

5.4 Guidance for the use of grouping characteristics, in the process of examining distinctness, is provided through the General Introduction.

6. Introduction to the Table of Characteristics

6.1 Categories of Characteristics

6.1.1 Standard Test Guidelines Characteristics

Standard Test Guidelines characteristics are those which are approved by UPOV for examination of DUS and from which members of the Union can select those suitable for their particular circumstances.

6.1.2 Asterisked Characteristics

Asterisked characteristics (denoted by *) are those included in the Test Guidelines which are important for the international harmonization of variety descriptions and should always be examined for DUS and included in the variety description by all members of the Union, except when the state of expression of a preceding characteristic or regional environmental conditions render this inappropriate.

6.2 States of Expression and Corresponding Notes

States of expression are given for each characteristic to define the characteristic and to harmonize descriptions. Each state of expression is allocated a corresponding numerical note for ease of recording of data and for the production and exchange of the description.

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

Where appropriate, example varieties are provided to clarify the states of expression of each characteristic.

6.5 Legend

(*) Asterisked characteristic – see Chapter 6 (Section 6.1.2)

(QL) Qualitative characteristic – see Chapter 6 (Section 6.3)
(QN) Quantitative characteristic – see Chapter 6 (Section 6.3)
(PQ) Pseudo-qualitative characteristic – see Chapter 6 (Section 6.3)

{ **ASW 11** (Chapter 6.5) – Legend: Explanations covering several characteristics }

(+) See Explanations on the Table of Characteristics in Chapter 8.

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

{ GN 12 Selecting a characteristic for inclusion in the Table of Characteristics }
{ GN 14 Characteristics examined by patented methods }
{ GN 15 Special characteristics }
{ GN 16 New types of characteristics }
{ GN 17 Presentation of Characteristics: Approved characteristics}

<table>
<tr><td></td><td></td><td>English</td><td>français</td><td>deutsch</td><td>español</td><td>Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo</td><td>Note/ Nota</td></tr>
<tr><td>Char. No.</td><td></td><td>{GN 18 Presentation of Characteristics: Heading of a characteristic}</td><td>{GN 18 Presentation of Characteristics: Heading of a characteristic}</td><td>{GN 18 Presentation of Characteristics: Heading of a characteristic}</td><td>GN 18 Presentation of Characteristics: Heading of a characteristic}</td><td></td><td></td></tr>
<tr><td>{ GN 13.1, 13.4 Asterisked characteristics}</td><td>{ GN 24 Growth stage }</td><td colspan="4" rowspan="3">{ GN 19 Presentation of characteristics: General presentation of states of expression}

GN 20 Presentation of characteristics: States of expression according to type of expression of a characteristic</td><td rowspan="3">{ GN 28 Example varieties}</td><td rowspan="3"></td></tr>
<tr><td>{ GN 22 Explanation of the characteristic}</td><td>{ GN 25 Recommendations for conducting the examination }</td></tr>
<tr><td>{ GN 21 Type of expression of the characteristic}</td><td>GN 23 Explanations covering several characteristics}</td></tr>
</table>

{ GN 26 Order of characteristics in the Table of Characteristics}
{ GN 27 Handling a long list of characteristics in the Table of Characteristics }

8. Explanations on the Table of Characteristics

{ **ASW 12** (Chapter 8) – Explanations covering several characteristics }
{ GN 29 (Chapter 8) – Example varieties: Names }

9. Literature

{ GN 30 (Chapter 9) - Literature }

10. Technical Questionnaire

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:

	Application date: (not to be filled in by the applicant)

TECHNICAL QUESTIONNAIRE
to be completed in connection with an application for plant breeders' rights
{ **ASW 13** (Chapter 10: TQ title) – TQ for hybrid varieties}

1. Subject of the Technical Questionnaire

1.1 Botanical name	{ Botanical name }
1.2 Common name	{ Common name}

{ **ASW 14** (Chapter 10: TQ 1) – Subject of the TQ}

2. Applicant

Name	
Address	
Telephone No.	
Fax No.	
E-mail address	

Breeder (if different from applicant)

3. Proposed denomination and breeder's reference

Proposed denomination (if available)	
Breeder's reference	

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:

[#]4. Information on the breeding scheme and propagation of the variety

4.1 Breeding scheme

{ **ASW 15** (Chapter 10: TQ 4.1) – information on breeding scheme }

4.2 Method of propagating the variety

{ GN 31 (Chapter 10: TQ 4.2) – information on method of propagating the variety }
{ GN 32 (Chapter 10: TQ 4.2) – information on method of propagation of hybrid varieties }

5. Characteristics of the variety to be indicated (the number in brackets refers to the corresponding characteristic in Test Guidelines; please mark the note which best corresponds).

Characteristics	Example Varieties	Note
{ GN 13.3, 13.4 (Chapter 10: TQ 5) – TQ characteristics }		

[#] Authorities may allow certain of this information to be provided in a confidential section of the Technical Questionnaire.

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:

6. Similar varieties and differences from these varieties

Please use the following table and box for comments to provide information on how your candidate variety differs from the variety (or varieties) which, to the best of your knowledge, is (or are) most similar. This information may help the examination authority to conduct its examination of distinctness in a more efficient way.

Denomination(s) of variety(ies) similar to your candidate variety	Characteristic(s) in which your candidate variety differs from the similar variety(ies)	Describe the expression of the characteristic(s) for the **similar** variety(ies)	Describe the expression of the characteristic(s) for **your** candidate variety
Example	{ GN 33 } (Chapter 10: TQ 6) – similar varieties }		

Comments:

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:

[#]7. Additional information which may help in the examination of the variety

7.1 In addition to the information provided in sections 5 and 6, are there any additional characteristics which may help to distinguish the variety?

Yes [ ] No [ ]

(If yes, please provide details)

7.2 Are there any special conditions for growing the variety or conducting the examination?

Yes [ ] No [ ]

(If yes, please provide details)

7.3 Other information

{ GN 34 (Chapter 10: TQ 7.3) – variety use}

{ **ASW 16** (Chapter 10: TQ 7.3) – where a photograph of the variety is to be provided }

8. Authorization for release

(a) Does the variety require prior authorization for release under legislation concerning the protection of the environment, human and animal health?

Yes [ ] No [ ]

(b) Has such authorization been obtained?

Yes [ ] No [ ]

If the answer to (b) is yes, please attach a copy of the authorization.

[#] Authorities may allow certain of this information to be provided in a confidential section of the Technical Questionnaire.

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:

9. Information on plant material to be examined or submitted for examination.

9.1 The expression of a characteristic or several characteristics of a variety may be affected by factors, such as pests and disease, chemical treatment (e.g. growth retardants or pesticides), effects of tissue culture, different rootstocks, scions taken from different growth phases of a tree, etc.

9.2 The plant material should not have undergone any treatment which would affect the expression of the characteristics of the variety, unless the competent authorities allow or request such treatment. If the plant material has undergone such treatment, full details of the treatment must be given. In this respect, please indicate below, to the best of your knowledge, if the plant material to be examined has been subjected to:

(a) Microorganisms (e.g. virus, bacteria, phytoplasma) Yes [ ] No [ ]

(b) Chemical treatment (e.g. growth retardant, pesticide) Yes [ ] No [ ]

(c) Tissue culture Yes [ ] No [ ]

(d) Other factors Yes [ ] No [ ]

Please provide details for where you have indicated "yes".

……

{ **ASW 17** (Chapter 10: TQ 9.3) – tests for the presence of virus or other pathogens }

10. I hereby declare that, to the best of my knowledge, the information provided in this form is correct:

Applicant's name

Signature Date

[Annex 2 follows]

ANNEX 2:

ADDITIONAL STANDARD WORDING (ASW)

FOR THE TG TEMPLATE

This section presents the additional standard wording (ASW) which can be added to the standard wording within the TG Template (Annex 1). The numbering refers to the numbering in the TG Template.

Key

{…} Blank for the relevant information to be inserted by the drafter of the Test Guidelines.

ASW 1 (TG Template: Chapter 2.3) – Seed quality requirements

(a) Test Guidelines which only apply to seed-propagated varieties

Alternative 1: "The seed should meet the minimum requirements for germination, species and analytical purity, health and moisture content, specified by the competent authority. In cases where the seed is to be stored, the germination capacity should be as high as possible and should, be stated by the applicant."

Alternative 2: "The seed should meet the minimum requirements for germination, species and analytical purity, health and moisture content, specified by the competent authority."

(b) Test Guidelines which apply to seed-propagated as well as other types of varieties

Alternative 1: "In the case of seed, the seed should meet the minimum requirements for germination, species and analytical purity, health and moisture content, specified by the competent authority. In cases where the seed is to be stored, the germination capacity should be as high as possible and should, be stated by the applicant."

Alternative 2: "In the case of seed, the seed should meet the minimum requirements for germination, species and analytical purity, health and moisture content, specified by the competent authority."

ASW 2 (TG Template: Chapter 3.1) – Number of growing cycles

(a) Single growing cycle

"The minimum duration of tests should normally be a single growing cycle."

(b) Two independent growing cycles

"The minimum duration of tests should normally be two independent growing cycles."

ASW 3 (TG Template: Chapter 3.1.2) – Explanation of the growing cycle (fruit species)

(a) Fruit species with clearly defined dormant period

"3.1.2 The growing cycle is considered to be the duration of a single growing season, beginning with bud burst (flowering and/or vegetative), flowering and fruit harvest and concluding when the following dormant period ends with the swelling of new season buds."

(b) Fruit species with no clearly defined dormant period

"3.1.2 The growing cycle is considered to be the period ranging from the beginning of active vegetative growth or flowering, continuing through active vegetative growth or flowering and fruit development and concluding with the harvesting of fruit."

ASW 4 (TG Template: Chapter 3.3) – Conditions for conducting the examination

1. Fruit species

In the case of Test Guidelines covering fruit species, the following sentence may be added after the first sentence of section 3.3:

"In particular, it is essential that the [trees] / [plants] produce a satisfactory crop of fruit in each of the two growing cycles."

2. Information for conducting the examination of particular characteristics

(a) Stage of development for the assessment

"The optimum stage of development for the assessment of each characteristic is indicated by a number in the second column of the Table of Characteristics. The stages of development denoted by each number are described at the end of Chapter 8."

(b) Type of observation

"The recommended method of observing the characteristic is indicated by the following key in the second column of the Table of Characteristics:

MG: single measurement of a group of plants or parts of plants
MS: measurement of a number of individual plants or parts of plants
VG: visual assessment by a single observation of a group of plants or parts of plants
VS: visual assessment by observation of individual plants or parts of plants"

(c) Type of plot for observation

The following text may, for example, be added to appropriate Test Guidelines:

"The recommended type of plot in which to observe the characteristic is indicated by the following key in the second column of the Table of Characteristics:

A: spaced plants
B: row plot
C: special test

"Other examples may also be developed, for example to refer to other types of plots (e.g. drilled plots)."

(d) Observation of color by eye

"Because daylight varies, color determinations made against a color chart should be made either in a suitable cabinet providing artificial daylight or in the middle of the day in a room without direct sunlight. The spectral distribution of the illuminant for artificial daylight should conform with the CIE Standard of Preferred Daylight D 6500 and should fall within the tolerances set out in the British Standard 950, Part I. These determinations should be made with the plant part placed against a white background."

ASW 5 (TG Template: Chapter 3.4) – Plot design

(a) Single plots

"Each test should be designed to result in a total of at least {…} [plants] /[trees]"

(b) Spaced plants and row plots

"Each test should be designed to result in a total of at least {…} spaced plants and {…} meters of row plot."

(c) Replicated plots

"Each test should be designed to result in a total of at least {…} plants, which should be divided between {…} replicates."

ASW 6 (TG Template: Chapter 3.4) – Removal of plants or parts of plants

"The design of the tests should be such that plants or parts of plants may be removed for measurement or counting without prejudice to the observations which must be made up to the end of the growing cycle."

ASW 7 (Chapter 3.5) – Number of plants / parts of plants to be examined

(a) Test Guidelines where all plants in the test are observed for all characteristics

Alternative 1: "Unless otherwise indicated, all observations should be made on { x } plants or parts taken from each of { x } plants."

Alternative 2: "Unless otherwise indicated, all observations should be made on { x } plants or parts taken from each of { x } plants. In the case of parts of plants, the number to be taken from each of the plants should be { y }."

(b) Test Guidelines where the observation of certain characteristics is made on a sample of plants in the test

Alternative 1: "Unless otherwise indicated, all observations on single plants should be made on { x } plants or parts taken from each of { x } plants and any other observations made on all plants in the test."

Alternative 2: "Unless otherwise indicated, all observations on single plants should be made on { x } plants or parts taken from each of { x } plants and any other observations made on all plants in the test. In the case of observations of parts taken from single plants, the number of parts to be taken from each of the plants should be { y }."

ASW 8 (TG Template: Chapter 4.2) – Uniformity assessment

(a) Cross-pollinated varieties

(i) Test Guidelines covering only cross-pollinated varieties

"The assessment of uniformity should be according to the recommendations for cross-pollinated varieties in the General Introduction."

(ii) Test Guidelines covering cross-pollinated varieties and varieties with other forms of propagation

"The assessment of uniformity for [cross-pollinated][seed-propagated] varieties should be according to the recommendations for cross-pollinated varieties in the General Introduction."

(b) Hybrid varieties

"The assessment of uniformity for hybrid varieties depends on the type of hybrid and should be according to the recommendations for hybrid varieties in the General Introduction."

(c) Uniformity assessment by off-types

(i) Test Guidelines covering only varieties with uniformity assessed by off-types

"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."

(ii) Test Guidelines covering varieties with uniformity assessed by off-types and other types of varieties

"For the assessment of uniformity of [self-pollinated] [vegetatively propagated] [seed-propagated] varieties, 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."

ASW 9 (TG Template: Chapter 4.3.2) – Stability assessment: general

(a) Test Guidelines covering seed-propagated and vegetatively propagated varieties

"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."

(b) Test Guidelines covering only seed-propagated varieties

"Where appropriate, or in cases of doubt, stability may be tested, either by growing a further generation, or by testing a new seed stock to ensure that it exhibits the same characteristics as those shown by the previous material supplied."

(c) Test Guidelines covering only vegetatively propagated varieties

"Where appropriate, or in cases of doubt, stability may be tested, either by growing a further generation, or by testing a new plant stock to ensure that it exhibits the same characteristics as those shown by the previous material supplied."

ASW 10 (TG Template: Chapter 4.3.3) – Stability assessment: hybrid varieties

"Where appropriate, or in cases of doubt, the stability of a hybrid variety may, in addition to an examination of the hybrid variety itself, also be assessed by examination of the uniformity and stability of its parent lines."

ASW 11 (TG Template: Chapter 6.5) – Legend: Explanations covering several characteristics

"(a)-{x} See Explanations on the Table of Characteristics in Chapter 8.1"

ASW 12 (TG Template: Chapter 8) – Explanations covering several characteristics

"8.1 Explanations covering several characteristics

"Characteristics containing the following key in the second column of the Table of Characteristics should be examined as indicated below:

(a)
(b) etc.

"8.2 Explanations for individual characteristics

Ad. 1 etc."

ASW 13 (TG Template: Chapter 10: TQ Title) – TQ for hybrid varieties

"In the case of hybrid varieties which are the subject of an application for plant breeders' rights, and where the parent lines are to be submitted as a part of the examination of the hybrid variety, this Technical Questionnaire should be completed for each of the parent lines, in addition to being completed for the hybrid variety."

ASW 14 (TG Template: Chapter 10: TQ 1) – Subject of the TQ

(a) In the case of Test Guidelines covering more than one species, additional boxes should be added in the following format:

"1. Subject of the Technical Questionnaire (please indicate the relevant species):

1.1.1 Botanical name [species 1]
1.1.2 Common Name [species 1] [ ]

1.2.1 Botanical name [species 2]
1.2.2 Common Name [species 2] [ ]"

etc.

(b) If the Test Guidelines cover a genus or a large number of species, question 1 should be presented as follows:

"1. Subject of the Technical Questionnaire (please complete):

1.1 Botanical name
1.2 Common Name"

with the boxes left blank for completion by the applicant.

ASW 15 (TG Template: Chapter 10: TQ 4.1) – Information on breeding scheme

(a) Alternative 1

"Variety resulting from:

"4.1.1 Crossing

"(a) controlled cross [ ]
(please state parent varieties)
"(b) partially known cross [ ]
(please state known parent variety(ies))
"(c) unknown cross [ ]

"4.1.2 Mutation [ ]
(please state parent variety)

"4.1.3 Discovery and development [ ]
(please state where and when discovered and how developed)

"4.1.4 Other [ ]"
(please provide details)"

(b) Alternative 2

"Variety resulting from:

"4.1.1 Crossing

"(a) controlled cross [ ]
(please state parent varieties)
"(b) partially known cross [ ]
(please state known parent variety(ies))
"(c) unknown cross [ ]

"4.1.2 Discovery and development [ ]
(please state where and when discovered and how developed)

"4.1.3 Other [ ]"
(please provide details)"

ASW 16 (TG Template: Chapter 10: TQ 7.3) – Where a photograph of the variety is to be provided

"A representative color photograph of the variety should accompany the Technical Questionnaire."

ASW 17 (TG Template: Chapter 10: TQ 9.3) – Tests for the presence of virus or other pathogens

"9.3 Has the plant material to be examined been tested for the presence of virus or other pathogens?

Yes [ ]

(please provide details as specified by the Authority)

No [ ]"

[Annex 3 follows]

ANNEX 3:

GUIDANCE NOTES (GN)

FOR THE TG TEMPLATE

This section presents guidance notes (GN) for drafters of Test Guidelines for use when developing the TG Template (Annex 1) into specific Test Guidelines. The numbering refers to the numbering in the TG Template.

GN 1 (TG Template: Cover page) – Botanical name

The family and all elements of the botanical name, except for the elements denoting the author and classification, should be presented in italics, e.g.

Poaceae	not Poaceae
Allium L.	not Allium L.
Beta vulgaris L.	not *Beta vulgaris L.*
Beta vulgaris L. var. *conditiva* Alef.	not *Beta vulgaris L. var. conditiva Alef.*

GN 2 (TG Template: Cover page) – Associated Documents

"Other associated UPOV documents" seeks information on other UPOV documents which should be read in conjunction with the Test Guidelines concerned. In particular, it seeks information on other Test Guidelines which might be relevant, e.g. a user of the Field Bean Test Guidelines might wish to know that Test Guidelines also exist for Broad Bean and that, previously, these two crops were combined in a single set of Test Guidelines. Thus, the associated documents for the Field Bean Test Guidelines might be:

TG/08/4 + Corr.	Broad Bean, Field Bean (Replaced)
TG/xx/1	Broad Bean

It is not necessary to make reference to the General Introduction or the TGP documents which are already referenced in the paragraph above.

GN 3 (TG Template: Chapter 1.1) – Subject of the Test Guidelines: More than one species

Separate Test Guidelines are usually drawn up for each species. It may however be considered necessary to include two or more species, a whole genus or even a larger unit in one Test Guidelines document.

GN 4 (TG Template: Chapter 1.1) – Subject of the Test Guidelines: Different types or groups within a species

The General Introduction states that "Different groups of varieties within a species can be dealt with in separate or subdivided Test Guidelines if the categories can be reliably separated on the basis of characteristics suitable for distinctness, or where an appropriate procedure has been developed to ensure that all varieties of common knowledge will be adequately considered for distinctness".

This explanation is provided to ensure that groups or types of varieties are only created where it is possible to ensure that a variety will be clearly placed into the appropriate group, or if not, that other measures are taken to ensure that all varieties of common knowledge are considered for distinctness. Thus, if the Test Guidelines cover only a group, or type, within a species, this section should explain which characteristics, or what other basis, ensure distinctness of all the varieties covered by the Test Guidelines from all other varieties.

The Test Guidelines should also explain the characteristics, or other basis, which allow distinctness for types or groups of varieties covered by different sets of example varieties (e.g. Winter/Spring) or should explain what other basis ensures distinctness of all the varieties covered by one type or group, from all the varieties of another.

GN 5 (TG Template: Chapter 1.1) – Subject of the Test Guidelines: Family name

In some cases, it is also considered helpful to identify the family(ies), as indicated by the Germplasm Resources Information Network (GRIN) database (http://www.ars-grin.gov/).

GN 6 (TG Template: Chapter 1.1) – Guidance for new types and species

Document TGP/13, Guidance Notes for New Types and Species may provide useful information for drafters of Test Guidelines covering new types (e.g. multi- or interspecific hybrids) or species.

GN 7 (TG Template: Chapter 2.3) –Quantity of plant material required

The drafter of the Test Guidelines should consider the following factors when determining the quantity of material required:

(a) Anticipated level of plant establishment, from submitted plant material, for field trials or other growing tests;

(b) Quantity of submitted plant material to be used for non-growing tests (e.g. erucic acid test for Rape seed);

(c) Quantity of submitted plant material to be used for quality checks on the submitted plant material (e.g. germination tests for seed);

(d) Quantity of submitted plant material to be used for reference samples;

(e) Rate of deterioration during storage.

GN 8 (TG Template: Chapter 3.1.2) – Explanation of the growing cycle

Chapter 3.1 makes reference to the number of growing cycles. In some cases it may be necessary to clarify what is meant by a growing cycle. In the case of fruit species, additional standard wording has been developed (see ASW 3).

GN 9 (TG Template: Chapter 3.3) – Requirements for a satisfactory growing cycle

It may be necessary to specify in this section that there must be, for example, a satisfactory crop of fruit in each of the growing cycles and that the first fruiting cycle should not be considered to produce a satisfactory crop. In the case of fruit species, additional standard wording has been developed (see ASW 4.1).

GN 10 (TG Template: Chapter 3.4) – Test design

Document TGP/8, Use of Statistical Procedures in DUS Testing contains guidance on experimental design.

GN 11 (TG Template: Chapter 4.2) – Uniformity assessment

In the case of Test Guidelines which cover different types of variety, combinations of the individual wordings in ASW 8 can be used.

Document TGP/10, Examining Uniformity, contains guidance on the development of appropriate uniformity standards.

GN 12 (TG Template: Chapter 7) – Selecting a characteristic for inclusion in the Table of Characteristics

1. The characteristics included in the Table of Characteristics are called "Standard Test Guidelines Characteristics." The General Introduction (Chapter 4.8 Table) explains that such characteristics are those "characteristics that are accepted by UPOV for examination of DUS and from which members of the Union can select those suitable for their particular circumstances."

2. To be included in the Table of Characteristics, the characteristic must satisfy the criteria for a Standard Test Guidelines Characteristic, namely:

(a) it must satisfy the criteria for use of any characteristic for DUS as set out in the General Introduction (Chapter 4.2) which are that it:

(i) results from a given genotype or combination of genotypes;

(ii) is sufficiently consistent and repeatable in a particular environment;

(iii) exhibits sufficient variation between varieties to be able to establish distinctness;

(iv) is capable of precise definition and recognition;

(v) allows uniformity requirements to be fulfilled;

(vi) 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;

(b) it must have been used to develop a variety description by at least one member of the Union and

(c) 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.

3. One of the most important functions of the TWPs, with respect to the development of Test Guidelines, is to ensure that these criteria are fulfilled before acceptance of a characteristic in the Test Guidelines.

4. Independent characteristics should be presented as separate characteristics where this improves clarity and always where it is possible to identify a separate qualitative characteristic (see GN 20.2). It is important that independent characteristics are split to avoid confusion. For example, in pea, marbling and anthocyanin spotting of the testa should be separated.

GN 13 Characteristics with specific functions

1. Asterisked characteristics (TG Template: Chapter 7: column 1)

1.1 The General Introduction (Chapter 4.8: Table: Functional Categories of Characteristics) states that asterisked characteristics are "characteristics that are important for the international harmonization of variety descriptions." The criteria for selecting a characteristic as an asterisked characteristic are that:

(a) it must be a characteristic included in the Test Guidelines;

(b) it should always be examined for DUS and included in the variety description by all members of the Union except when the state of expression of a preceding characteristic or regional environmental conditions render this inappropriate;

(c) it must be useful for the international harmonization of variety descriptions;

(d) particular care should be taken before selection of disease resistance characteristics.

1.2 It should be clarified that criterion (b) is worded to ensure that members of the Union which are not able to examine the characteristic do not use this as a reason to object to the characteristic being agreed as an asterisked characteristic. Thus, any characteristic which satisfies the criteria and, in particular, is useful for the international harmonization of variety descriptions should be selected as an asterisked characteristic, even if it cannot be examined for all varieties or by all members of the Union. The upper limit on the number of asterisked characteristics should, therefore, be determined by the number which are required to provide useful internationally harmonized variety descriptions.

2. Grouping characteristics (TG Template: Chapter 5.3)

2.1 Selection

The General Introduction (Chapter 4.8: Table: Functional Categories of Characteristics) explains that grouping characteristics are characteristics in which the documented states of expression, even where recorded at different locations, can be used either individually or in combination with other such characteristics: to select varieties of common knowledge that can be excluded from the growing trial used for examination of distinctness, and/or to organize the growing trial so that similar varieties are grouped together.

Thus, the General Introduction specifies that grouping characteristics:

1. Must be:

   (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:

   (a) selecting varieties of common knowledge that can be excluded from the growing trial used for examination of distinctness and/or,
   (b) organizing the growing trial so that similar varieties are grouped together.

3. Should be:

   (a) an asterisked characteristic and/or, (see also GN 13.4)
   (b) included in the Technical Questionnaire or application form.

The number of grouping characteristics is not fixed. If there are only a few characteristics which satisfy the criteria these are all likely to be selected as grouping characteristics. However, if there are many characteristics which fulfill the criteria these might not all be selected as grouping characteristics in the Test Guidelines. In the latter case, a selection of the most efficient characteristics for the uses set out in 2(a) and 2(b) might be made.

2.2 Color

In the case of color characteristics, where the states of expression in the Table of Characteristics are represented by the RHS Colour Chart number, color groups should be created for use of these characteristics as grouping characteristics. If the characteristic is included in the Technical Questionnaire, the color groups created for the characteristic for grouping purposes and for presenting the characteristic in the Technical Questionnaire should be the same.

3. Technical Questionnaire (TQ) characteristics (TG Template: Chapter 10: TQ 5)

3.1 The model Technical Questionnaire included in the Test Guidelines seeks information on specific characteristics of importance for distinguishing varieties.

3.2 Characteristics to be included in the Technical Questionnaire should comprise:

   (a) the grouping characteristics and

   (b) the most discriminating characteristics,

unless it is considered unrealistic to expect breeders to describe these characteristics.

3.3 Where necessary, characteristics in the Test Guidelines can be simplified (e.g. color groups can be created rather than requesting an RHS Colour Chart reference) for inclusion in the Technical Questionnaire (TQ), if this would be of assistance for the breeder completing the TQ. Furthermore, the characteristics contained in the Test Guidelines can be formulated in a different way, if breeders would then be able to describe them more precisely and the information would be useful for performing the test. For example, the TQ for peach may request information on whether the variety is a "melting" or "non-melting" type, which although not a characteristic in the Table of Characteristics would provide information on the states of expression of certain characteristics included in the Table of Characteristics.

4. Relationship between Asterisked, Grouping and TQ characteristics

The relationship between grouping, asterisked and TQ characteristics can be summarized as follows:

(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.

GN 14 (TG Template: Chapter 7) – Characteristics examined by patented methods

(a) In the case of a characteristic which can be examined by a patented method, the leading expert should disclose any known information on the patent, or patent applications pending, that may relate to the assessment of the expression of the characteristic concerned. The information on known patents should include the name and contact details of the patent holder, patent registration number, and countries where the patent has been granted (or patent applications pending, if applicable).

(b) The leading expert should assess the importance of the patented method concerning the assessment of the expression of a characteristic and the suitability of alternative, non-patented methods, if available. The leading expert and relevant TWP should then decide whether it would be better to revisit the issue at a later stage or if it would be appropriate to contact the patent holder to find a suitable arrangement for utilization of the patented method. The TWP may decide to seek the advice of the Technical Committee and, if appropriate, the Technical Committee may also seek the advice of the Administrative and Legal Committee.

(c) If a decision to contact the patent holder is taken, three situations may arise:

(i) the patent holder waives his/her rights for the particular use of the patented method concerning the assessment of the expression of a characteristic for DUS testing and development of variety descriptions;

(ii) the patent holder is willing to negotiate licenses with other parties on a non-discriminatory basis and on reasonable terms and conditions;

(iii) the patent holder is not willing to cooperate with the solutions in (i) or (ii).

(d) If (c) (i) is applicable, a footnote in the corresponding characteristic(s) of the Test Guidelines should indicate that the method for assessing the expression of this characteristic is protected by patent, but that the patent holder has waived his/her rights for the purpose of DUS testing and development of variety descriptions. The members of the TWP may decide, considering the importance of the characteristic, if it will be appropriate to select it as an asterisked characteristic.

(e) If (c) (ii) is applicable, it is recommended that the characteristic(s) concerned will not be selected as an asterisked characteristic as it will not satisfy the requirement for accessibility that enables harmonization of variety description using asterisked characteristics. The members of the TWP may decide whether interested parties would like to retain the characteristic related to the method protected by patent as a standard Test Guidelines characteristic. Interested parties may decide to start negotiations with the patent holder for licenses on a non-discriminatory basis and on reasonable terms and conditions. Such negotiations are left to the interested parties and would take place outside UPOV. An appropriate note indicating that the method concerning the assessment of the expression of the characteristic is protected by patent and that the patent holder provides for licenses on a non-discriminatory basis and on reasonable terms and conditions should be provided.

(f) If (c) (iii) is applicable, it is recommended that the characteristic(s) concerned with the method protected by patent will not be selected as an asterisked characteristic. The experts of the relevant TWP may decide, in light of the information available, e.g. experience of a member of the Union that has used the characteristic to develop a variety description, whether the characteristic should or should not be selected as a standard Test Guidelines characteristic. An appropriate note indicating that the method concerning the assessment of the expression of the characteristic is protected by patent should be provided.

GN 15 (TG Template: Chapter 7) – Special characteristics

Document TGP/12, Special Characteristics, provides guidance on the use of special characteristics, e.g. resistance to diseases, insects and chemicals and chemical constituents examined by protein electrophoresis.

GN 16 (TG Template: Chapter 7) – New types of characteristics

Document TGP/15, New Types of Characteristics, provides guidance on the possible use of new types of characteristics.

GN 17 (TG Template: Chapter 7) – Presentation of Characteristics: Approved characteristics

A collection of characteristics, with their corresponding states of expression, which have already been approved for inclusion in existing Test Guidelines, is presented in Annex 4: "Collection of Approved Characteristics". There are two main purposes for developing this collection: Firstly, it helps to ensure that the states of expression used for the same or similar characteristics included in Test Guidelines, are harmonized as far as possible; Secondly, the characteristics presented in the collection have already been translated into the UPOV languages. Thus, Test Guidelines utilizing characteristics from Annex 4 will cost UPOV less and are less likely to experience delays in presentation for adoption.

Drafters of Test Guidelines are invited to search the collection for the characteristic which they wish to use. If the appropriate characteristic, and its corresponding states of expression, are found this can be copied directly into the new Test Guidelines. However, it should be remembered that what may appear to be very similar characteristics in different types of plant, or different organs of the same plant, may in fact be under different types of genetic control. Thus, for example, in one type of plant, or one organ, the characteristic "profile" might be a qualitative characteristic e.g. straight (1), curved (2) but in another type of plant, or organ, it might be a quantitative characteristic e.g. straight or slightly curved (1), moderately curved (2), strongly curved (3).

In cases where the required characteristic is not present in the collection, guidance is provided in GN 18, GN 19 and GN 20.

GN 18 (TG Template: Chapter 7: column 3) – Presentation of Characteristics: Heading of a characteristic

1. General

A characteristic normally starts by identifying the:

- plant or, alternatively, the plant part (organ) concerned,

followed, after a colon, by the

- organ or, alternatively, the sub-organ or the specialty to be observed

e.g. "Plant: number of flowers" or "Flower: width of petal" or "Petal: color of margin".

The heading of a characteristic should be worded precisely and, if possible, be self-contained to be understood and clear without the knowledge of the states. The states should also be easily understood without the full text of the characteristic, irrespective of whether the overall text of the characteristic may appear repetitive. For example, the word "presence of" or "intensity of" could be added, even if the first state would read "absent" or "absent or very

weak." This applies particularly to cases where not only the absence/presence is to be listed as a characteristic but where a number of criteria are of importance with regard to a single organ, such as number, size, length, width, density, color, etc..

2. Clarifying similar characteristics

In the case of two or more characteristics where there is only one difference between the characteristics (e.g. lower or upper side of blade) to be observed, the part that differs should be underlined e.g.

- "lower side", or "upper side"

3. Characteristics which only apply to certain varieties

In some cases, the state of expression of a preceding qualitative characteristic determines that a subsequent characteristic is not applicable e.g. it would not be possible to describe the shape of leaf lobes for a variety which did not have leaf lobes. In cases where this is not obvious, or where the characteristics are separated in the Table of Characteristics, the heading of the subsequent characteristic is preceded by an underlined reference to the types of varieties to which it applies, on the basis of the preceding characteristic, e.g.:

"Only varieties with more than one seed color: Seed: distribution of secondary color"

GN 19 (TG Template: Chapter 7: column 3) – Presentation of characteristics: General presentation of states of expression

1. Order of states of expression

1.1 General

Insofar as it is possible to impose an order on the expressions inside a characteristic, the smaller, lesser or lower expressions should be assigned the lower Note. The order of states should as far as possible be:

- from weak to strong,
- from light to dark,
- from low to high,
- from narrow to broad.

1.2 Color

In the case of colors, in addition to the spectral order, the chronological appearance of the color (e.g. as the fruit ripens) may also be used (see also document TGP/14.2, Glossary of Botanical, Statistical and Terms Used in UPOV Documents: Botanical Terms). The same sequence should be used for organs with similar states within a single document (e.g. color of leaf and color of stem).

1.3 Shape

Shapes of base and apex should go from pointed to rounded or from raised to depressed (see also document TGP/14.2, Glossary of Botanical, Statistical and Terms Used in UPOV Documents: Botanical Terms).

1.4 Attitude / Growth Habit

When presenting attitude / growth habit using the: erect to horizontal; upright to prostrate; or erect to reflexed range, the state "erect / upright" is always presented as state 1. This is because the "erect / upright" state is the only fixed state for all versions of this characteristic, whilst the other end of the scale might end with "prostrate", "reflexed," etc. according to the individual circumstances.

2. Hyphen (-)

In the English wording, there should be no hyphen for the connection of the words (narrow acute, yellow green, green yellow, etc.). In English, yellow - green with a space before and after the hyphen would mean yellow to green while yellow-green without spaces would mean yellowish green. This differentiation cannot be made in other languages and, to avoid confusion for translation into other languages, hyphens should not be used.

3. Numbers

Numbers lower than 10 should be written. Higher numbers should be indicated numerically.

4. Figures and Ranges

The wording of states should take account of how the wording of the variety description would appear. Thus, it is not appropriate to use states such as "10 to 15%", or "20 to 25 g", but rather, for example, low/medium/high. Where such figures are useful for illustrating the states, they should be provided in Chapter 8 of the Test Guidelines (Explanations on the Table of Characteristics).

GN 20 (TG Template: Chapter 7: column 3) – Presentation of characteristics: States of expression according to type of expression of a characteristic

1. Introduction

1.1 The General Introduction (Chapter 4, Section 4.3) states that "To enable varieties to be tested and a variety description to be established, the range of expression of each characteristic in the Test Guidelines is divided into a number of states for the purpose of description, and the wording of each state is attributed a numerical 'Note.' The division into states of expression is influenced by the type of expression of the characteristic …" The General Introduction establishes that there are three basic types of expression of characteristic, namely, qualitative, quantitative and pseudo-qualitative. Whether the expression of a characteristic is qualitative, quantitative or pseudo-qualitative will depend on the genetic control of the characteristic.

1.2 When deciding on characteristics and their states of expression to be used for plant variety testing, it is important always to first observe the range of expression exhibited across varieties, note down the most appropriate wording, compare the wording with examples under

the different types of expression, and to then decide whether the wording is suitable, or whether a different wording should be chosen. Throughout the process, the applicability of the wording to the particular situation in the given plant group should be ensured. However, it is useful to have some harmonized principles to ensure that similar characteristics are treated in a similar fashion.

1.3 In this section the different types of expression of characteristics, and ways of presenting these in the Table of Characteristics, are explained.

2. Qualitative characteristics

2.1 Explanation

The General Introduction states that "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."

2.2 Separating Qualitative Characteristics

2.2.1 The General Introduction states (Chapter 5, Section 5.3.3.2.1) that "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". These guidelines for distinctness are different from the approach for quantitative characteristics and pseudo-qualitative characteristics and, therefore, it is very important that qualitative characteristics are correctly identified for the examination of distinctness.

2.2.2 As explained in section 1.1, whether the expression of a characteristic is qualitative, quantitative or pseudo-qualitative will depend on the genetic control of the characteristic.

2.2.3 The relative clarity of the guidelines on distinctness for qualitative characteristics means that it can be useful to seek to identify all qualitative characteristics, even where these might be contained within a wider range of expression. For example, in cases where there is discontinuous separation between complete absence and different degrees of presence the characteristic should be split into a qualitative characteristic with the states "absent (1)" and "present (9)" and a quantitative characteristic with the appropriate notes for degrees of presence (see Section 3). In such cases, it is very important that the "absent" state has a discontinuous separation from the "weak", or "very weak" state, and that this is unlikely to be masked by environmental effects, to avoid incorrect decisions on distinctness.

2.2.4 In the case of pseudo-qualitative characteristics it may also be possible to split the characteristic into a qualitative characteristic and a quantitative or another pseudo-qualitative characteristic. For example, the pseudo-qualitative characteristic "color: light yellow (1); medium yellow (2); dark yellow (3); green (4); light pink (5); medium pink (6); dark pink (7);" might be split into the following characteristics:

Qualitative characteristic

1. Color:
yellow (1); green (2); pink (3)

Quantitative characteristic

2. Only yellow and pink varieties: Intensity of color:
weak (3); medium (5); strong (7)

2.2.5 However, as explained above, it is very important that there is a discontinuous separation between, for example, dark yellow and green. It would also be necessary to consider the likelihood of breeding techniques producing new types of varieties which would bridge the discontinuous separation.

2.3 Division of Range of Expression into States and Notes

2.3.1 General Rule

In general, the states of expression of qualitative characteristics are given consecutive numbers starting with Note 1 and often have no upper limit.

2.3.2 Exceptions to the General Rule

2.3.2.1 Ploidy

In the case of ploidy, to avoid confusion, the number of chromosome sets is accepted as the Note (e.g. diploid (2), tetraploid (4)).

2.3.2.2 Absence/Presence

Where there is discontinuous separation between absence and presence, the characteristic should have the states:

absent (note 1) and
present (note 9)

3. Quantitative characteristics

3.1 Explanation

The General Introduction states that "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."

3.2 Division of Range of Expression into States and Notes

3.2.1 In the case of quantitative characteristics, it is first necessary to determine the appropriate range to describe the characteristic. In general, a standard "1-9" scale (see Section 3.3) is used for quantitative characteristics, but a "limited" range (see Section 3.4) and a "condensed" range have also been accepted (see Section 3.5).

3.2.2 The various ranges are explained in the following sections:

3.3 The "1-9" scale

3.3.1 Introduction

3.3.1.1 As a general rule, states are formed in such a way that for the weak and strong expressions a reasonable word pair is chosen, for example:

weak/strong
short/long
small/large

3.3.1.2 These word pairs are given Notes 3 and 7 and the intermediate state Note 5. The remaining states of the scale using Notes 1 to 9 are formed according to the following examples:

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

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

3.3.1.3 However, it is not necessary to present all the 9 states in the Table of Characteristics and the following abbreviated versions are, in general, more appropriate:

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
-

3.3.1.4 The full range of states is equally spaced along the total scale, with the "mid-point" ("medium") state in the middle. The states 3, 5, 7 should, as a minimum, be indicated in the Test Guidelines, but if it is necessary to list example varieties for one or both extremes, then

states 1 and/or 9 should also indicated, as appropriate. In the case of the "absence/degrees of presence" range where the state 1 is, for example, "absent or very weak" (rather than "very weak") or "absent or very small" (rather than very small), state 1 should be indicated even if example varieties cannot be provided. Experts very seldom decide to list example varieties for even states, but in this case the full range of states, 1, 2, 3, 4, 5, 6, 7, 8, 9, is listed.

3.3.1.5 Where the range of expression of a quantitative characteristic, for all varieties of common knowledge, is not sufficiently large to justify the use of the full "1-9" scale, it is possible to use the "limited" range (see Section 3.4), or "condensed" range, as appropriate (see Section 3.5).

3.3.2 Wording of States

3.3.2.1 The "Typical Example" (e.g. weak/strong; short/long)

3.3.2.1.1 Wording of uneven states

In the typical example of a quantitative characteristic with a "1-9"scale (see Section 3.3.1.2), states 3 and 7 are worded by using only the basic weak and strong expressions, e.g. "weak (3)," "strong (7)," or "weakly curved (3)," "strongly curved (7)." States 1 and 9 are worded by adding "very" to the wording of states 3 and 7 respectively, ("very weak (1)", "very strong (9)" or "very weakly curved (1)", "very strongly curved (9)").

3.3.2.1.2 Wording of even states

Even states are seldom indicated in the Test Guidelines. However, where required, the even states should be worded by combining the wording of the preceding and following states, in that order, by using the word "to", e.g. "very weak to weak (2)" (see Section 3.3.1.2).

3.3.2.2 Other examples

3.3.2.2.1 Quantitative characteristics do not always relate to the typical weak / strong scale. However, the same approach of describing the intensifying degrees, either side of the "mid-point" state 5, should be followed. It should be noted that state 5 is always the "mid-point" in the range of a "1-9"scale and normally worded "medium" or "intermediate," but may also be, for example, "moderately curved" or "moderately shorter" (see example 4 below) if this is the "mid-point" of the full range of expression. The following examples are provided to indicate the type of ranges for some quantitative characteristics.

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

3.3.2.2.2 The wording of the states should be mutually exclusive, to avoid confusion. Thus, in Example 1 above, state 3 should not read "smaller" because this term would apply to all states from 1 to 4. Similarly, in Example 2 it is necessary to word state 7 as "moderately obtuse" and not just "obtuse"—since all states 6 to 9 are obtuse..

3.4 "Limited" range

The "limited" range, comprising a 1-5 scale, is used where the range of expression of a characteristic is physically limited at both ends and it is not appropriate to divide the expression into more than three intermediate states. For example:

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

3.5 "Condensed" range

3.5.1 Introduction

A condensed range has been accepted for some quantitative characteristics. The condensed range has been introduced to address situations where it is not appropriate to divide the expression into nine states and where at least one point on the scale is fixed. Such characteristics are normally assessed visually. The condensed range exists in a "1-3", or "1-4" scale as follows:

3.5.2 The "1-3" scale

3.5.2.1 Two versions of the "1-3" scale, for absence / degrees of presence (fixed state 1), have been accepted as follows:

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

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

3.5.2.2 Other examples of possible use of the "1-3" scale, are as follows:

State	Example 1 **Size relative to:**	Example 2 **Angle:**	Example 3 **Position:**	Example 4 **Length in relation to:**
1	smaller	acute	at base	Equal
2	same size	right angle	in middle	slightly shorter
3	larger	obtuse	at apex	moderately shorter

3.5.3 The "1-4" scale

The "1-4" scale can be used when there is a fixed state at one point in the scale and an asymmetric distribution of states around this state. For example:

State	Example 1 **Angle**	Example 2 **Profile**	Example 3 **Relative position**
1	acute	convex	below
2	right-angle	plane	same level
3	moderately obtuse	moderately concave	moderately above
4	strongly obtuse	strongly concave	greatly above

3.5.4 Wording of States

Whereas, in the wording of a state in the "1-9 scale" (see Section 3.3.2.2) the use of simple terms such as "smaller" or "acute" is often inappropriate, such simple terms are often appropriate in the "1-3" scale (see section 3.5.2.2: Examples 1 and 2: states 1 and 3) and the "1-4" scale (see section 3.5.3: Examples 1 to 3: state 1), since they are mutually exclusive. However, it is also possible that different degrees of intensity (e.g. slightly, moderately etc.) can also be identified, in which case the use of simple terms, such as "shorter", is inappropriate because they are not mutually exclusive (see section 3.5.2.2: Example 4: states 2 and 3; and section 3.5.3: Examples 1 to 3: states 3 and 4).

3.6 Color

3.6.1 Different intensities of the same color hue may be presented as quantitative characteristics, if they fulfil the requirements for a quantitative characteristic. For example:

(a) Intensity of green color: light (3), medium (5), dark (7)

(b) Intensity of anthocyanin coloration: weak (3), medium (5), strong (7)

3.6.2 The typical wording of the "1-9 scale", the "limited scale" or the "condensed scale" should not be used to present characteristics with different hues of color, even if they appear to form a linear range with continuous variation (see Section 4.4).

4. Pseudo-Qualitative characteristics

4.1 Explanation

The General Introduction states that "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."

4.2 Division of Range of Expression into States and Notes

4.2.1 Unless it is clear that no intermediates exist between states (i.e. they are qualitative characteristics—see Section 2.2), suitably worded intermediate states should be included. For example:

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)

4.2.2 Words such as "intermediate" should preferably not be used, and should definitely not be used more than once in a single characteristic:

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)

4.2.3 Where there are intermediate states, each degree of expression should have a qualifying adjective in order to make all states mutually exclusive. For example:

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)

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

4.3 Individual and Combined States of Expression

4.3.1 Explanation

Some pseudo-qualitative characteristics contain two or more individual expressions and one or more combinations.

4.3.2 Order of states

The order of the states is such that the combinations are listed between the alternatives. For example:

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).

4.4 Color

Characteristics combining different color hues (e.g. red, green, blue etc.) with brightness (e.g. light, medium, dark) or saturation (e.g. whitish, grayish) are normally

pseudo-qualitative characteristics. More guidance on color terms can be found in TGP/14.2: Botanical Terms.

4.5 Shape

4.5.1 Characteristics containing different shapes (e.g. ovate, obovate, triangular etc.) are often pseudo-qualitative characteristics. However, characteristics concerning different sizes of the same shape should not refer to the shape in the states of expression and should be presented as quantitative characteristics. For example:

Width: narrow (3), medium (5), broad (7)
Not: Shape: narrow ovate (1), ovate (2), broad ovate (3)

4.5.2 More guidance on shape terms can be found in TGP/14.2: Botanical Terms.

GN 21 (TG Template: Chapter 7: column 1) – Type of expression of the characteristic

In cases where the required characteristic, with a suitable scale, is not present in the collection of approved characteristics (see GN 17), GN 20: Presentation of Characteristics According to Their Type of Expression, provides guidance on developing an appropriate scale according to the type of expression i.e. qualitative, quantitative and pseudo-qualitative.

GN 22 (TG Template: Chapter 7: column 1) – Explanations for individual characteristics

A plus "(+)" is indicated in the Table of Characteristics where an explanation concerning the characteristic is provided in Chapter 8, Explanations on the Table of Characteristics. In particular, such explanations include, where necessary, an illustration of the characteristic and/or its states of expression.

GN 23 (TG Template: Chapter 7: column 2) – Explanations covering several characteristics

In cases where an explanation applies to several characteristics (e.g. part of the plant on which to observe particular characteristics, timing of observations etc.) a note is placed in column 2 and the explanation provided in Chapter 8.1, according to ASW 11.

GN 24 (TG Template: Chapter 7: column 2 – box 1) – Growth stage

In some Test Guidelines, the growth stage at which the examination of the characteristic should be done is provided here. In such cases, the stages of development denoted by each number are described in a section within Chapter 8, according to ASW 4.2.

GN 25 (TG Template: Chapter 7: column 2 – box 2) – Recommendations for conducting the examination

This box provides the key for guidance on conducting the examination. For example, recommendations on the method of observation (e.g: visual assessment or measurement;

observation of single plants or a group of plants) or type of plot (e.g: spaced plants; row plot; drilled plot; special test) may be provided. ASW 4.2 provides possible standard wording.

GN 26 (TG Template: Chapter 7: column 1) – Order of characteristics in the Table of Characteristics

1. The order of characteristics should, in general, follow:

(a) Botanical order

(i) The botanical order is as follows:

- seed (for characteristics examined on seed submitted)
- seedling
- plant (e.g. growth habit)
- root
- root system or other subterranean organs,
- stem
- leaf (blade, petiole, stipule)
- inflorescence
- flower (calyx, sepal, corolla, petal, stamen, pistil)
- fruit
- seed (for characteristics examined on seed harvested from the growing trial).

(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

(iii) subject to the following exceptions:

In cases where the characteristics of a sub-organ are units of the higher organ (e.g.: Flower: arrangement of petals; flower: number of styles), these would normally be placed with the characteristics of the higher organ. However, where more practical, these can be kept together with the characteristics of the sub-organ concerned (e.g.: "Flower: arrangement of petals" could remain together with the other characteristics on the petal and "Flower: number of styles" could remain together with the other characteristics on the styles).

In general, the shape of base and apex are grouped together with the shape of the whole organ since, for practical reasons, these shapes are recorded at the same time.

or:

(b) Chronological order;

followed by:

(c) Characteristic order

with the following ranking:

- 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).

GN 27 (TG Template: Chapter 7) – Handling a long list of characteristics in the Table of Characteristics

1. The General Introduction (Chapter 4.8, Functional Categorization of Characteristics) clarifies that the function of characteristics included in the Test Guidelines is to provide a list of UPOV accepted characteristics from which users can select those suitable for their particular circumstances. The criteria for inclusion in the Test Guidelines are that they must satisfy the basic requirements for a characteristic set out in the General Introduction (Chapter 4.2, Selection of Characteristics) and must have been used to develop a variety description by at least one member of the Union. Through the work of its TWPs, UPOV provides a system of "quality control" by ensuring that any characteristics included in the Test Guidelines meet these criteria.

2. The purpose and criteria set out above demonstrate the intention that the Test Guidelines should contain all characteristics which are suitable for examination of DUS and that there should be no restriction, on the inclusion of characteristics in Test Guidelines, on the basis of the degree of use. This intention is confirmed by recognition that, in the case of a long list of characteristics, an indication of the extent of use of each characteristic might be considered.

3. In cases where certain characteristics are most useful in certain environments (e.g. cooler climates), the TWP may decide to indicate this in the Table of Characteristics to help users to select the most suitable characteristics for their circumstances. Furthermore, in some circumstances the TWP may consider that it is unhelpful to include all those characteristics which fulfill the criteria for inclusion and, if there is a full consensus amongst all interested experts, may agree to omit certain characteristics. Such omitted characteristics would then be included in document TGP/5, Experience and Cooperation in DUS Testing, in the section on "Notification of Additional Characteristics".

GN 28 (TG Template: Chapter 6.4) – Example varieties

1. Purpose of example varieties

The General Introduction (Chapter 4.3) states that "example varieties are provided in the Test Guidelines to clarify the states of expression of a characteristic." This clarification of the states of expression is required with respect to two aspects:

(a) to illustrate the characteristic and/or

(b) to provide the basis for ascribing the appropriate state of expression to each variety and, thereby, to develop internationally harmonized variety descriptions.

1.1 Illustration of a characteristic

Although example varieties have the benefit of enabling examiners to see a characteristic in "real life", in many cases, the illustration of a characteristic by photographs or drawings (to be provided in chapter 8 of the Test Guidelines) may provide a clearer illustration of the characteristic. Furthermore, the difficulty in selecting suitable example varieties, which satisfy all the requirements in Section 2 below, means that photographs or drawings are an important alternative or addition to example varieties as a means of illustrating characteristics.

1.2 International Harmonization of Variety Descriptions

1.2.1 The main reason why example varieties are used in place of, for example, actual measurements is that measurements can be influenced by the environment. The following hypothetical and simplistic example has been created to demonstrate why example varieties are superior to absolute measurements in this respect.

Example: Characteristic to be examined: Leaf length

1.2.2 Figure 1 compares the results for a candidate variety "X" from DUS growing trials in country A and country B:

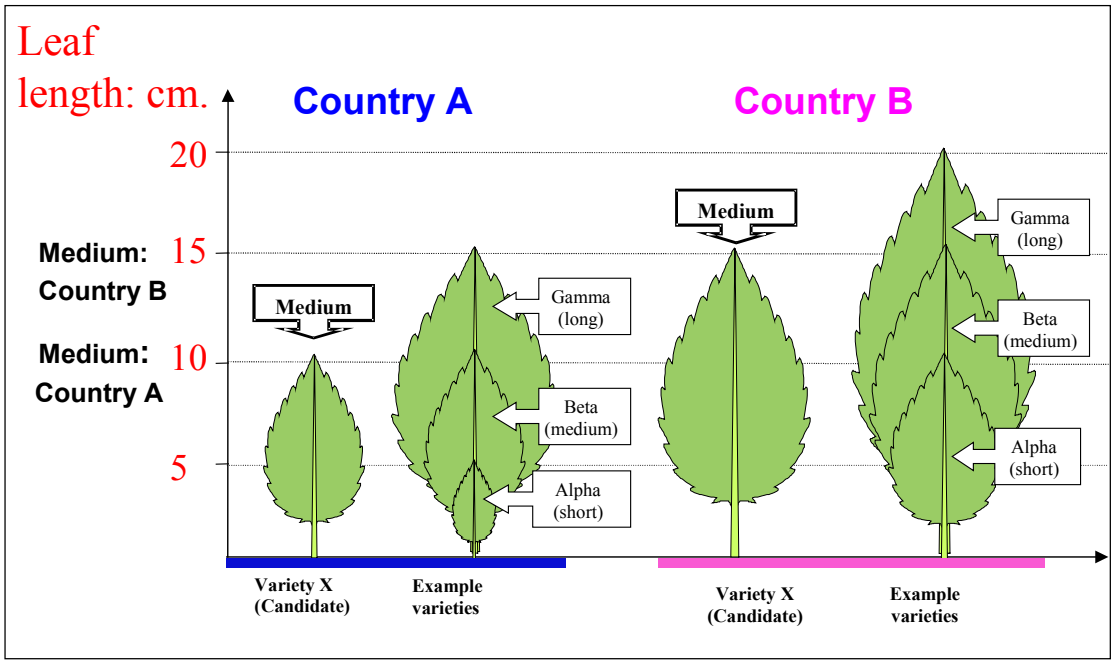


Figure 1

(a) Example varieties in the Test Guidelines

1.2.3 Example varieties are important to adjust the description of the characteristics for the year and location effects, as far as possible. Thus, using the relative scale provided by the example varieties, it can be seen that the example variety Beta measured 10 cm in Country A and 15 cm in Country B, but in both locations demonstrates the state of expression "medium". On this basis, candidate variety X would be considered to have a medium length leaf in both Countries A and B.

	Example Varieties	Note
Leaf: length of blade		
short	Alpha	3
medium	Beta	5
long	Gamma	7

(b) Fixed measurements in the Test Guidelines

1.2.4 If absolute measurements were to be indicated in the Test Guidelines and the Test Guidelines were drafted in Country A on the basis of the data from Figure 1, the Table of Characteristics would show the following:

	Length	Note
Leaf: length of blade		
short	5 cm	3
medium	10 cm	5
long	15 cm	7

1.2.5 Because there is no "relative scale" provided by the example varieties, the same data as for Figure 1 would lead to the following descriptions:

	Country A	Country B
Variety X	10 cm **(medium: note 5)**	15 cm **(long: note 7)**

1.2.6 Thus, if absolute measurements were used in the Test Guidelines, variety X, when grown in Country A, would be described as "medium (note 5)", but if grown in Country B, would be described as "long (note 7)". This demonstrates that it could be very misleading to compare descriptions from different locations on the basis of absolute measurements, without the adjustment for year or location effects provided by example varieties.

1.2.7 Nevertheless, because of the possibility of particular interactions between the variety genotype and location (e.g. influence of photoperiod), it should not be assumed that descriptions developed in different countries or locations using the same set of example varieties will be the same (see also section 2.2). Guidance on the scope for comparison of varieties on the basis of descriptions produced in different locations is provided in document TGP/9, Examining Distinctness.

2. Criteria for Example Varieties

2.1 Availability

Authorities responsible for DUS testing and breeders need to be able to obtain plant material of example varieties and therefore, in general, example varieties should be widely and readily available for the coverage of the Test Guidelines (see also Section 4 "Multiple sets of example varieties"). For this reason, at the point of starting to draft Test Guidelines, drafters are encouraged to seek lists of varieties from interested parties in order to identify example varieties with the widest availability. If an example variety it is not widely available, it should only be recommended if there are specific reasons for this, for example, if it is the only variety with a particular state of expression for a given characteristic.

2.2 Fluctuation of expression

The example variety should provide a clear example of the state of expression. Any fluctuation in the expression of the example variety for the given state for which it has been selected, in relation to other varieties in the collection, would lead to problems for harmonization of variety descriptions. If varieties are prone to such fluctuations, it is an indication of a specific variety genotype / location interaction which would make it difficult to

harmonize variety descriptions on an international basis. In such cases, a single set of example varieties should not be provided in the Test Guidelines because it would be misleading and may even lead to an incorrect interpretation of the characteristic (see also section 1.2.7).

2.3 Illustration of the range of expression within the variety collection

The set of example varieties for a given characteristic should provide information on the range of expression of the characteristic in the collection of varieties covered by the Test Guidelines. Thus, in general, it is necessary to provide example varieties for more than one state of expression and in the case of:

Quantitative characteristics:

(i) "1-9" scale: to provide example varieties for at least three states of expression (e.g. (3), (5) and (7)), although, in exceptional cases, example varieties for only two states of expression may be accepted;

(ii) "1-5" / "1-4" / "1-3" scales: to provide example varieties for at least two states of expression.

Pseudo-qualitative characteristics: to provide a set of example varieties to cover the different types of variation within the range of expression of the characteristics.

2.4 Minimizing the number

For practical reasons it is recommended to choose the overall set of example varieties for the Test Guidelines in a way that all the desired characteristics and states of expression are covered by the minimum total number of example varieties. This means that, if possible, each example variety should be used for as many characteristics as possible and example varieties should not be used only for one or very few characteristics.

2.5 Agreement of interested experts

2.5.1 The set of example varieties proposed by the leading expert in the preparation of the Test Guidelines should be prepared in cooperation with all the interested experts. If one or more expert(s) consider(s) that certain example varieties are not suitable for their conditions, a new example variety should, if possible, be found (see also Section 4 "Multiple sets of example varieties").

2.5.2 It is important that the set of example varieties for a particular characteristic is developed by one expert in order to ensure that the set of example varieties for that characteristic represents the same scale. Example varieties proposed by other experts, for the same characteristic, should be known to represent the same scale before they are accepted in Test Guidelines. In cases where it is necessary to develop a separate scale for different types of variety, or different regions, multiple sets of example varieties may need to be developed (see Section 4 "Multiple sets of example varieties").

3. Deciding where example varieties are needed for a characteristic

3.1 The General Introduction (Chapter 4.3) states that "example varieties are provided in the Test Guidelines to clarify the states of expression of a characteristic." As explained in Section 1, this clarification of the states of expression is required with respect to two aspects:

(a) to illustrate the characteristic and/or

(b) to provide the basis for ascribing the appropriate state of expression to each variety and, thereby, to develop internationally harmonized variety descriptions.

3.2 UPOV has, in particular, identified "Asterisked Characteristics" as those which are important for the international harmonization of variety descriptions.

3.3 The decision on whether example varieties are required for a characteristic can be summarized as follows:

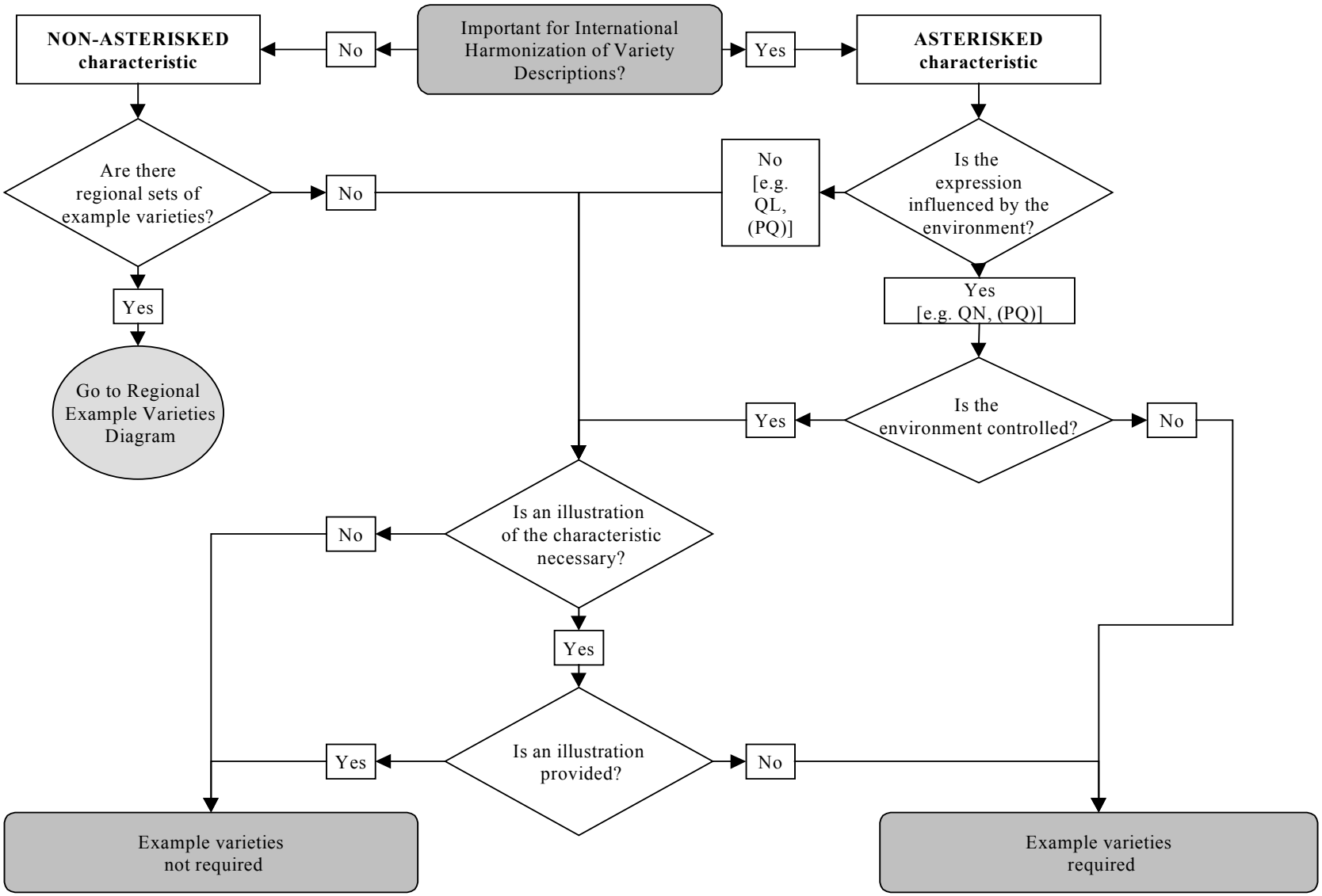
(i) If a characteristic is not important for the international harmonization of variety descriptions (non-asterisked characteristic) and example varieties are not necessary for illustration of the characteristic (see Section 1.1), there is no requirement for example varieties to be provided.

(ii) If a characteristic which is important for the international harmonization of variety descriptions (asterisked characteristic) is not influenced by the year or environment (e.g. qualitative characteristics) and example varieties are not necessary for illustration of the characteristic (see Section 1.1), it may not be necessary to provide example varieties.

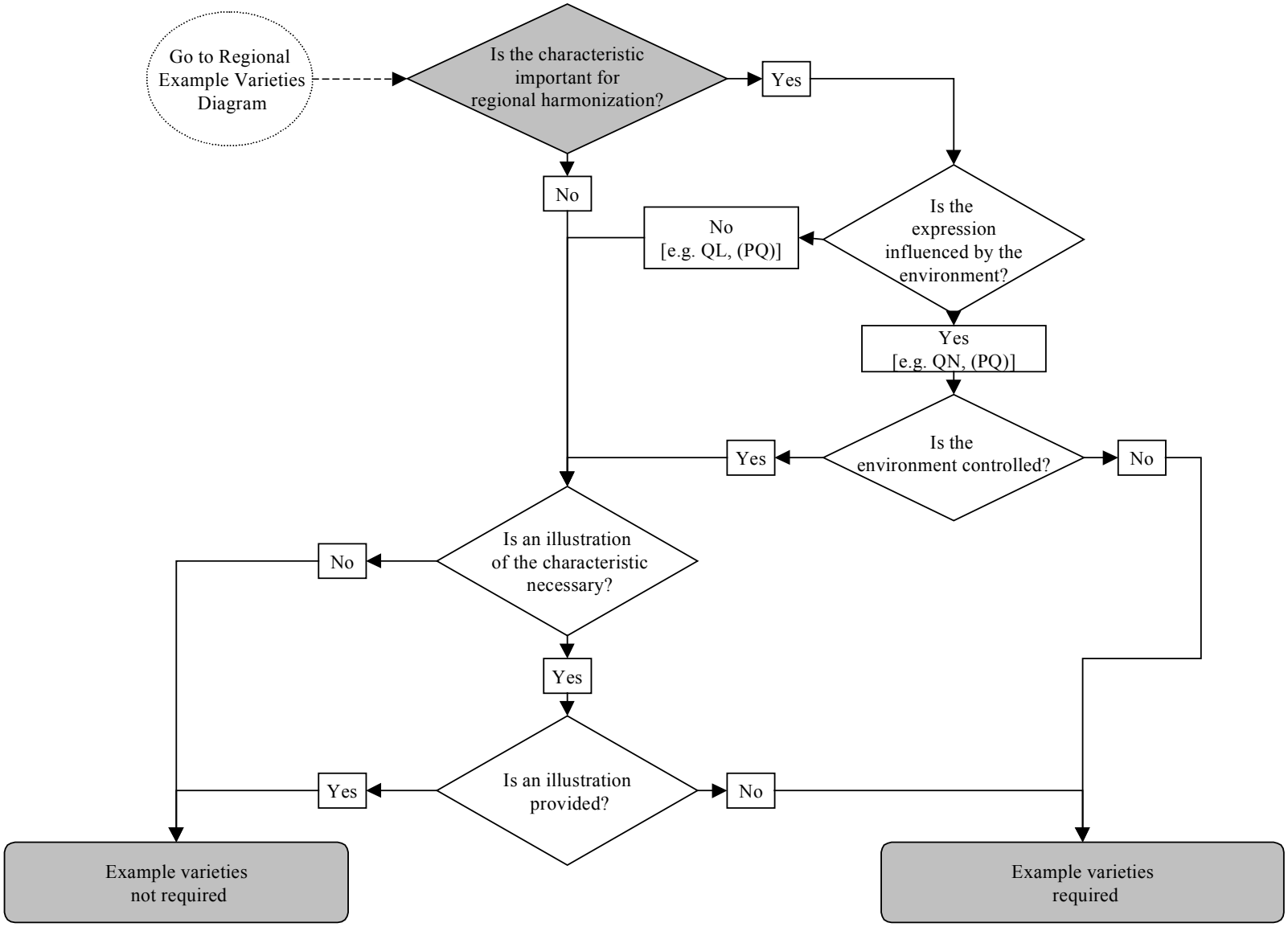
(iii) If a characteristic is important for the international harmonization of variety descriptions (asterisked characteristics) and is influenced by the environment (most quantitative and pseudo-qualitative characteristics) or example varieties are necessary for illustration of the characteristic (see Section 1.1) it is necessary to provide example varieties.

3.4 The process for deciding if example varieties need to be provided for a characteristic is illustrated in the following Flow Diagram 1. The second part of the Flow Diagram 2 indicates where example varieties should be provided in the case of regional sets of example varieties (see Section 4).

Deciding if Example Varieties are needed for a characteristic



Deciding if Example Varieties are needed for a characteristic: Regional Sets of Example Varieties



4. Multiple sets of example varieties

4.1 Introduction

4.1.1 The General Introduction states that "Different groups of varieties within a species can be dealt with in separate or subdivided Test Guidelines if the categories can be reliably separated on the basis of characteristics suitable for distinctness, or where an appropriate procedure has been developed to ensure that all varieties of common knowledge will be adequately considered for distinctness."

4.1.2 This explanation is provided to ensure that groups or types of varieties are only created where it is possible to ensure that a variety will be clearly placed into the appropriate group or, if not, that other measures are taken to ensure that all varieties of common knowledge are considered for distinctness. Thus, if the example varieties in the Test Guidelines cover only a group, or type, within a species, the Test Guidelines should explain which characteristics, or what other basis, ensure distinctness of all the varieties of one type of variety from all the varieties of the other types.

4.2 Regional sets of example varieties

4.2.1 Basis for regional sets of example varieties

UPOV Test Guidelines need to cover all the different countries, regions and environments where the DUS examinations are conducted and, as far as possible, they provide universal sets of example varieties in order maximize harmonization of variety descriptions. However, the regional adaptation of varieties in some genera and species may mean that it is inappropriate to seek to harmonize variety descriptions on a global basis and, therefore, inappropriate to seek to develop a universal set of example varieties. Nevertheless, in such cases, regional harmonization is important and is facilitated by providing regional sets of example varieties as summarized in the flow diagram in section 3.4. The rationale for identifying regional types will be explained in the Test Guidelines and, where appropriate, correlation between the different regional sets of example varieties may be established.

4.2.2 Procedure for developing regional sets

4.2.2.1 In cases where the relevant TWP agrees to the development of regional sets of example varieties, the TWP concerned will determine the regions and the contributors of regional lists of varieties.

4.2.2.2 In cases where it is known by the relevant TWP that regional sets of example varieties are to be developed, this will be stated in the Test Guidelines.

4.2.3 Presentation

4.2.3.1 The existence of multiple sets of example varieties means that, for some or all characteristics, no example varieties are presented in the Table of Characteristics and the multiple sets of example varieties are presented in an annex available on the UPOV Website which is presented as follows:

	Region A					
Example varieties	Ch. 1	Ch. 2	Ch. 3	Ch. 4	Ch. 5	*etc.*
Variety A	3	1	3		3	
Variety B	5	2	7	1	1	
Variety C	7	3	5	9	2	
Variety D		4			4	
etc.						

	Region B					
Example varieties	Ch. 1	Ch. 2	Ch. 3	Ch. 4	Ch. 5	*etc.*
Variety I	3	4	5		1	
Variety II	5	2	3	1	2	
Variety III	7	1	7	9	3	
Variety IV		3			4	
etc.						

4.2.3.2 Even where the "example variety" column is empty (i.e. there are no universal example varieties for any characteristic), the column is retained in the Table of Characteristics to allow users to complete this with the appropriate example varieties.

4.3 Different types of variety

4.3.1 If it is not possible, with a single set of example varieties, to describe all the types of varieties (e.g. winter-types and spring-types) covered by the same Test Guidelines, they may be subdivided to create different sets of example varieties.

4.3.2 Where different sets of example varieties are provided for different types of varieties covered by the same Test Guidelines, they are placed in the Table of Characteristics in the same column as normal. The two sets of example varieties (e.g. winter and spring) are separated by a semicolon, with a key provided for each set and an explanation included in the legend of chapter 6 of the Test Guidelines.

Example: For certain characteristics, different example varieties are indicated for winter type and spring type varieties. These types are separated by a semicolon, with the winter types placed before the semicolon and prefixed by "(w)" and the spring types placed after the semicolon and prefixed by "(s)".

	Stage/ Stade/ Stadium/ Estado	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
7. (*) (+)	**25-29 M**	**Plant: habit**	**growth Plante: port**	**Pflanze: form**	**Wuchs- Planta: porte**		
		erect	dressé	aufrecht	erecto		1
		semi-erect	demi-dressé	halbaufrecht	semierecto	(w) Variety A, Variety C; (s) Alpha	3
		intermediate	demi-dressé à demi-étalé	mittel	intermedio	(w) Variety B; (s) Beta	5
		semi-prostrate	demi-étalé	halbliegend	semipostrado	; (s) Gamma	7
		prostrate	étalé	liegend	postrado		9

GN 29 (TG Template: Chapter 8: Example varieties: names)

1. Presentation of variety names

The recommendation of the International Code for the Nomenclature of Cultivated Plants (ICNCP), that variety names should be presented in single citation marks (e.g. 'Apex') when presented in text, should be followed.

2. Synonyms

2.1 Example varieties which are, or have been, protected or officially registered:

Where such a variety is used as an example variety and has been registered with a different denomination by some members of the Union, the denomination used in the Table of Characteristics should be the denomination by which it was registered by the first member of the Union granting protection to that variety. Other denominations may be presented in Chapter 8, but only where the alternative denominations clearly, and exclusively, identify the variety concerned.

2.2 Example varieties which have not been protected or officially registered:

In the case of a variety, used as an example variety, which has not been protected or officially registered, the denomination used in the Table of Characteristics should be that by which the variety is most widely known by members of the Union. Where necessary, any alternative names (synonyms) may be presented in Chapter 8, but only where the alternative names clearly, and exclusively, identify the variety concerned.

2.3 Where synonyms of example varieties are presented in Chapter 8 of the Test Guidelines, this should be indicated in Chapter 6: Section 6.4 "Example Varieties" of the Test Guidelines concerned.

GN 30 (TG Template: Chapter 9) - Literature

1. Format

Literature should be presented as follows:

[Surname 1], [Initials 1]., [Surname 2], [Initials 2] *etc.* ., [Year]: [Title]. [Publication]. [Town], [City / Region], [Country*], [pp. n_1 to n_2 or x pp.]

* presented as two-letter country code according to WIPO Standard ST.3 and International Standard ISO 3166.

Example:

Reid, C., Dyer, R.A., 1984: A review of the South African species of Cyrtanthus, The American Plant Life Society, California, US, 68 pp.

2. Languages

Literature will be presented in the language of the publication, with no translation.

3. Relevant literature

All relevant UPOV documents should be mentioned as associated documents on the cover page of the Test Guidelines (see GN 2) and not in Chapter 9. Chapter 9 should include reference to publications concerned with the characterization of varieties which have been produced by organizations other than UPOV, where these have been used in the development of the Test Guidelines.

GN 31 (TG Template: Chapter 10: TQ 4.2) – Information on method of propagating the variety

The examples below indicate how this section can be formatted and some appropriate terms which can be used:

Example 1

"4.2.1 Seed-propagated varieties

"(a)	Self-pollination	[ ]
"(b)	Cross-pollination	
	(i) population	[ ]
	(ii) synthetic variety	[ ]
"(c)	Hybrid	[ ]
	{…see GN 32 for example...}	
"(d)	Other	[ ]
	(please provide details)"	

"4.2.2 Vegetatively propagated varieties

{...*see Example 2*...} [... ... ...]

"4.2.3 Other [ ]"
(please provide details)"

Example 2

"4.2.1 Vegetative propagation

"(a) cuttings [ ]

"(b) *in vitro* propagation [ ]

"(c) other (state method) [ ]

"4.2.2 Seed [ ]

"4.2.3 Other [ ]"
(please provide details)"

GN 32 (TG Template: Chapter 10: TQ 4.2) – Information on method of propagation of hybrid varieties

"In the case of hybrid varieties the production scheme for the hybrid should be provided on a separate sheet. This should provide details of all the parent lines required for propagating the hybrid e.g.

"*Single Hybrid*

"(… female parent …) x (… male parent …)

"*Three-Way Hybrid*

"(… female line …) x (… male line …)

"=> single hybrid used as female parent x (… male parent …)

"and should identify in particular:

"(a) any male sterile lines
"(b) maintenance system of male sterile lines."

GN 33 (TG Template: Chapter 10: TQ 6) – Similar varieties

Drafters of Test Guidelines should provide a suitable example for the individual Test Guidelines concerned e.g.

Denomination(s) of variety(ies) similar to your candidate variety	Characteristic(s) in which your candidate variety differs from the similar variety(ies)	Describe the expression of the characteristic(s) for the **similar** variety(ies)	Describe the expression of the characteristic(s) for **your** candidate variety
Example	*Flower color*	*orange*	*orange red*

GN 34 (TG Template: Chapter 10: TQ 7.3) – Variety use

Drafters of Test Guidelines may introduce a request for information concerning the main use of the variety where this might help in the examination. The following examples illustrate how this section should be presented:

Example 1

7.3.1 Main use

(a) seed [ ]
(b) forage [ ]
(c) other [ ]
(please provide details)

Example 2

7.3.1 Main use

(a) garden plant [ ]
(b) pot plant [ ]
(c) cut-flower [ ]
(d) other [ ]
(please provide details)

[Annex 4 follows]

ANNEX 4:

COLLECTION OF

APPROVED CHARACTERISTICS

1. The following collection presents characteristics, with their corresponding states of expression, which have already been approved for inclusion in existing Test Guidelines. Drafters are invited to search this collection for the characteristic which they wish to use. If the appropriate characteristic and its corresponding states of expression are found, this can be copied directly into the new Test Guidelines. However, it should be remembered that what may appear to be very similar characteristics in different types of plant, or different organs of the same plant, may in fact be under different types of genetic control. Thus, for example, in one type of plant, or one organ, the characteristic "profile" might be a qualitative characteristic e.g. straight (1), curved (2) but in another type of plant, or organ, it might be a quantitative characteristic e.g. straight or slightly curved (1), moderately curved (2), strongly curved (3).

2. The collection presents the characteristic as it is included in the relevant Test Guidelines. In addition, for certain characteristics, it provides information on the Test Guidelines from which it has been taken. This information is placed in the blank "header" space in the column for example varieties since this entire column is likely to be "cleared" by the drafter after pasting into his new draft because the example varieties will not be relevant.

The Collection of Approved Characteristics is published on the UPOV Website:
http://www.upov.int/restrict/en/index.html

[End of document]