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SECTION 1 Technical Terms
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INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS
GENEVA

DRAFT

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)

DOCUMENT TGP/14

“GLOSSARY OF **TECHNICAL^a**, BOTANICAL AND STATISTICAL TERMS
USED IN UPOV DOCUMENTS”

Section 1: **Technical Terms^a**

Document prepared by the Office of the Union

to be considered by the

*Technical Committee at its forty-fourth session,
to be held in Geneva, from April 7 to 9, 2008*

Note for Draft version

Footnotes will be retained in published document

Endnotes are background information to assist in the consideration of this draft
and will not appear in the final, published document

I. TECHNICAL TERMS

Additional characteristic	<p>The General Introduction states in Chapter 4.2.3 that “The characteristics included in the individual Test Guidelines are not necessarily exhaustive and may be expanded with <i>additional characteristics</i> if that proves to be useful and the characteristics meet the conditions set out [in Chapter 4.2.1]”. It further clarifies in Chapter 4.8, “Functional Categorization of Characteristics” that the function of <i>additional characteristics</i> is:</p> <ul style="list-style-type: none"> “1. To identify new characteristics, not included in the Test Guidelines, that have been used by members of the Union in the examination of DUS and which should be considered for inclusion in future Test Guidelines”; and “2. To facilitate harmonization in the development and use of new characteristics and provide opportunity for expert review.”
Additional Standard Wording (Test Guidelines)	<p>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 <i>additional standard wording</i> (ASW) and guidance notes (GN) and indications are provided within the TG Template on where this further guidance is available. (see document TGP/7 “Development of Test Guidelines”: Section 3.2).</p>
Additional test	<p>An <i>additional test</i> is a test for examining relevant characteristics which is carried out in addition to the DUS growing trial. (see TGP/7 “Development of Test Guidelines”, Annex I: TG Template, Chapter 3.6)</p>
Administrative and Legal Committee	<p><i>UPOV Administrative and Legal Committee (see “[...]” website reference to be provided)</i></p>
Asterisked characteristic	<p><i>Asterisked characteristics</i> (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. (General Introduction, Chapter 4.8)</p>
ASW (Test Guidelines)	<p>Additional Standard Wording</p>
Atypical plant	<p><i>explanation to be provided from TGP/10 “Examining Uniformity”</i></p>
Authority	<p>“authority” means the authority entrusted with the task of granting breeders’ rights (see Article 30(1)(ii) of the 1991 Act of UPOV Convention)</p>
BMT	<p><i>UPOV Working Group on Biochemical and Molecular Techniques, and DNA-Profiling in Particular (BMT) (see “[...]” website reference to be provided)</i></p>

Breeder	Article 1(iv) of the 1991 Act states that: ““breeder” means <ul style="list-style-type: none"> - the person who bred, or discovered and developed, a variety, - the person who is the employer of the aforementioned person or who has commissioned the latter’s work, where the laws of the relevant Contracting Party so provide, or - the successor in title of the first or second aforementioned person, as the case may be”
Breeder’s Right	“breeder’s right” means the right of the breeder provided for in the UPOV Convention (see Article 1(v) of the 1991 Act of UPOV Convention)
CAJ	<i>UPOV Administrative and Legal Committee (see “[...]” website reference to be provided)</i>
Combined characteristic	A <i>combined characteristic</i> is a simple combination of a small number of characteristics. Provided the combination is biologically meaningful, characteristics that are assessed separately may subsequently be combined, for example the ratio of length to width, to produce such a combined characteristic. Combined characteristics must be examined for distinctness, uniformity and stability to the same extent as other characteristics. Combined characteristics are not to be confused with the application of methods, such as “multivariate analysis.” (see General Introduction, Chapter 4.6.3)
Consultative Committee	<i>Consultative Committee of UPOV (see “[...]” website reference to be provided)</i>
Contracting Party	State or Intergovernmental Organization party to the 1991 Act
Convention	International Convention for the Protection of New Varieties of Plants
Council	<i>Council of UPOV (see “[...]” website reference to be provided)</i>
^b COYD	For the assessment of distinctness, UPOV has developed a method known as the <i>Combined Over Years Distinctness (COYD)</i> analysis, which takes into account variations between years. Its main use is for cross pollinated, including synthetic, varieties but, if desired, it can also be used for self pollinated and vegetatively propagated varieties in certain circumstances. See also “DUSTNT”. (see General Introduction, Chapter 5.5.3.2) For further information on the application and use of COYD, see document TGP/9 “Examining Distinctness” and TGP/8 “Trial Design and Techniques Used in the Examination of Distinctness, Uniformity and Stability”
^b COYU	UPOV has proposed several statistical methods for dealing with uniformity in measured quantitative characteristics. One method, which takes into account variations between years, is the <i>Combined Over Years Uniformity (COYU)</i> method. See also “DUSTNT”. (see General Introduction, Chapter 6.4.2.2) For further information on the application and use of COYU, see documents TGP/10 “Examining Uniformity” and TGP/8 “Trial Design and Techniques Used in the Examination of Distinctness, Uniformity and Stability”.

Distinct / Distinctness	Article 7 “ <i>Distinctness</i> ” of the 1991 Act states: “The variety shall be deemed to be distinct if it is clearly distinguishable from any other variety whose existence is a matter of common knowledge at the time of the filing of the application. In particular, the filing of an application for the granting of a breeder’s right or for the entering of another variety in an official register of varieties, in any country, shall be deemed to render that other variety a matter of common knowledge from the date of the application, provided that the application leads to the granting of a breeder’s right or to the entering of the said other variety in the official register of varieties, as the case may be.”
Drafter’s Kit for Test Guidelines	A collection of guidance and information documents provided on the UPOV website for drafters of Test Guidelines (http://www.upov.int/restrict/en/index_drafters_kit.htm)
Drilled plot	A drilled plot is one in which seed is planted with a machine which does not place the seed individually. Compare to “Spaced plant plot/trial”
DUS	abbreviation of Distinctness, Uniformity and Stability
DUS test	examination of Distinctness, Uniformity and Stability
‘DUSTNT	<i>[explanation to be provided from TGP/8 “Trial Design and Techniques Used in the Examination of Distinctness, Uniformity and Stability”]</i> Details on how to obtain a copy of DUSTNT are provided on the UPOV website at <i>(to be provided)</i>
Ear-row	A row of plants grown from seeds obtained from a single ear of a plant.
Essential characteristic	Article 6 (1)(d) of the 1961 Convention / 1972 Act and 1978 Acts require that a variety “must be stable in its essential characteristics, that is to say, it must remain true to its description after repeated reproduction or propagation or, where the breeder has defined a particular cycle of reproduction or multiplication, at the end of each cycle.” The General Introduction (Chapter 7.2) clarifies that the essential characteristics include at least all characteristics used for the examination of DUS or included in the variety description established at the date of grant of protection of that variety. Therefore, all obvious characteristics may be considered, irrespective of whether they appear in the Test Guidelines or not.
Example variety	example varieties are provided in the Test Guidelines to clarify the states of expression of a characteristic (see General Introduction, Chapter 4.3 and TGP/7)
GAIA	<i>[explanation to be provided from TGP/9 “Examining Distinctness” / TGP/8 “Trial Design and Techniques Used in the Examination of Distinctness, Uniformity and Stability”]</i> Details on how to obtain a copy of GAIA are provided on the UPOV website at <i>(to be provided)</i>
General Introduction	document TG/1/3 “General Introduction to the Examination of Distinctness, Uniformity and Stability and the Development of Harmonized Descriptions of New Varieties of Plants”
GN (Test Guidelines)	Guidance Note (Test Guidelines)

Grouping characteristic	<i>Grouping characteristics</i> 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. (see General Introduction, Chapter 4.8)
Grouping varieties	see document TGP/9 “Examining Distinctness”, Sections 2 and 3 and “Grouping characteristic”
Growing cycle	Chapter 3.1 of the Test Guidelines makes reference to the number of growing cycles for the DUS test. 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 TGP/7 “Development of Test Guidelines”: Annex 1: GN 8 and Annex 2: ASW 3).
Guidance Note (Test Guidelines)	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 document TGP/7 “Development of Test Guidelines”: Section 3.3).
Independent growing cycle	<i>explanation to be provided from TGP/8 “Trial Design and Techniques Used in the Examination of Distinctness, Uniformity and Stability”</i>
Interested Expert (Test Guidelines)	The drafting of Test Guidelines is led by an expert or experts (referred to as the “leading expert(s)”) from within one of the UPOV Technical Working Parties (TWPs). The leading expert drafts the Test Guidelines in close cooperation with all those experts of the TWPs who have expressed an interest (“ <i>interested experts</i> ”). (see TGP/7 “Development of Test Guidelines”: Section 2.1)
Leading Expert (Test Guidelines)	The drafting of Test Guidelines is led by an expert or experts (referred to as the “ <i>leading expert(s)</i> ”) from within one of the UPOV Technical Working Parties (TWPs). The leading expert drafts the Test Guidelines in close cooperation with all those experts of the TWPs who have expressed an interest (“ <i>interested experts</i> ”). (see TGP/7 “Development of Test Guidelines”: Section 2.1)
Member of the Union	member of the International Union for the Protection of New Varieties of Plants: a State party to the 1961 UPOV Convention, the 1972 Act, or the 1978 Act, or a State or intergovernmental organization party to the 1991 Act. (see Article 1(xi) of the 1991 Act)
Note	Each state of expression in the Test Guidelines is allocated a corresponding numerical “Note” for ease of recording of data and for the production and exchange of variety descriptions. (see State of Expression)

Off-type	<p>Where all the plants of a variety are very similar, and in particular for vegetatively propagated and self-pollinated varieties, it is possible to assess uniformity by the number of obviously different plants – “<i>off-types</i>” – that occur.</p> <p>In the case of the determination of off-types by visual assessment, a plant is to be considered an off-type if it can be clearly distinguished from the variety in the expression of any characteristic of the whole or part of the plant that is used in the testing of distinctness, taking into consideration the particular features of its propagation. This definition makes it clear that, in the assessment of uniformity, the standard for distinctness between off-types and a candidate variety is the same as for distinctness between a candidate variety and other varieties.</p> <p>(see General Introduction, Chapter 6.4 and document TGP/10 “Examining Uniformity”)</p>
Parent(al) formula	<i>explanation to be provided from TGP/9 “Examining Distinctness” / TGP/8 “Trial Design and Techniques Used in the Examination of Distinctness, Uniformity and Stability”</i>
PBR	abbreviation of plant breeder’s rights
Plant	In Linnaeus’ system, living things were divided into the Kingdoms Vegetabilia (later Plantae) and Animalia. Fungi and several groups of algae have sometimes been classified as new kingdoms. However, for the purposes of plant breeders’ rights, these are still considered to be plants by many members of the Union.
Plant Breeders’ Right	see “breeder’s right”
Plant grouping	see “Variety”
Pseudo-qualitative characteristic	<p>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.</p> <p>(see General Introduction, Chapter 4.4.3)</p>
Qualitative characteristic	<p>“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.</p> <p>(see General Introduction, Chapter 4.4.1)</p>

Quantitative characteristic	<p>“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.</p> <p>(see General Introduction, Chapter 4.4.2)</p>
Reference variety	<p><i>explanation to be provided from TGP/8 “Trial Design and Techniques Used in the Examination of Distinctness, Uniformity and Stability”</i></p>
Relevant characteristic ^d	<p>Article 8 of the 1991 Act deems that a variety is uniform if, “subject to the variation that may be expected from the particular features of its propagation, it is sufficiently uniform in its <i>relevant characteristics</i>”. Similarly, Article 9 of the 1991 Act requires that a variety “shall be deemed to be stable if its <i>relevant characteristics</i> remain unchanged after repeated propagation or, in the case of a particular cycle of propagation, at the end of each such cycle.”</p> <p>The General Introduction (Chapters 6.2 and 7.2) clarifies that relevant characteristics of a variety include at least all characteristics used for the examination of DUS or included in the variety description established at the date of grant of protection of that variety. Therefore, any obvious characteristic may be considered relevant, irrespective of whether it appears in the Test Guidelines or not.</p> <p><i>[Additional clarification to be provided from TGP/8 “Trial Design and Techniques Used in the Examination of Distinctness, Uniformity and Stability”]</i></p>
Spaced plant plot/trial	<p>A spaced plant plot/trial is one in which the plants or seeds are planted at defined intervals. Compare to “Drilled plot”.</p>
Special characteristic	<p><i>Special characteristics</i> are those which are: characteristics based on the response to external factors, such as living organisms (e.g. disease resistance characteristics) or chemicals (e.g. herbicide resistance characteristics) (see General Introduction, Chapter 4.6.1); characteristics based on chemical constituents (see General Introduction, Chapter 4.6.2); and combined characteristics (see General Introduction, Chapter 4.6.3 and “combined characteristics” in this document)</p> <p>(see TGP/12 “Special Characteristics”)</p>
Stability	<p>Article 9 “<i>Stability</i>” of the 1991 Act states:</p> <p>“The variety shall be deemed to be stable if its relevant characteristics remain unchanged after repeated propagation or, in the case of a particular cycle of propagation, at the end of each such cycle.”</p>
Standard Test Guidelines characteristic	<p>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.</p> <p>(see General Introduction, Chapter 4.8)</p>
State of Expression	<p>States of expression (e.g. short/medium/tall; white/yellow/red; early/medium/late) are given for each characteristic in the Test Guidelines to define the characteristic and to harmonize descriptions. Each state of</p>

	expression is allocated a corresponding numerical “note” for ease of recording of data and for the production and exchange of the description.
Subgroup (Test Guidelines)	see “Test Guidelines Subgroup”
TC	<i>UPOV Technical Committee (see “[...]” website reference to be provided)</i>
Technical Committee	<i>UPOV Technical Committee (see “[...]” website reference to be provided)</i>
Technical Questionnaire	To help in the process of examining varieties, certain information is requested from the breeder, usually through a Technical Questionnaire to be submitted with the application. The model Technical Questionnaire, included in the Test Guidelines, seeks information on specific characteristics of importance for distinguishing varieties, information on the breeding scheme of the variety and any other information which may help to distinguish the variety. It also requests the breeder to identify similar varieties and characteristics by which the candidate may be distinguished from these similar varieties. (General Introduction, Chapter 5.3.1.4)
Technical Working Party	<i>UPOV Technical Working Party (see “[...]” website reference to be provided)</i>
Technical Working Party for Agricultural Crops	<i>UPOV Technical Working Party for Agricultural Crops (see “[...]” website reference to be provided)</i>
Technical Working Party for Fruit Crops	<i>UPOV Technical Working Party for Fruit Crops (see “[...]” website reference to be provided)</i>
Technical Working Party for Ornamental Plants and Forest Trees	<i>UPOV Technical Working Party for Ornamental Plants and Forest Trees (see “[...]” website reference to be provided)</i>
Technical Working Party for Vegetables	<i>UPOV Technical Working Party for Vegetables (see “[...]” website reference to be provided)</i>
Technical Working Party on Automation and Computer Programs	<i>UPOV Technical Working Party on Automation and Computer Programs (see “[...]” website reference to be provided)</i>
Territory	“ <i>territory</i> ”, in relation to a UPOV member, means, where the UPOV member is a State, the territory of that State and, where the UPOV member is an intergovernmental organization, the territory in which the constituting treaty of that intergovernmental organization applies. (see Article 1(vii) of the 1991 Act)

Test Guidelines	abbreviation of UPOV “Guidelines for the Conduct of Tests for Distinctness, Uniformity and Stability”. The purpose of the <i>Test Guidelines</i> 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. (see General Introduction)
Test Guidelines characteristic	see also “ <i>Standard Test Guidelines characteristic</i> ”, “ <i>Grouping characteristic</i> ” and “ <i>Asterisked characteristic</i> ” (see General Introduction, Chapter 4.8)
Test Guidelines Subgroup	The Technical Working Party (TWP) establishes a subgroup consisting of the leading expert and the other interested experts wishing to participate in the drafting of the Test Guidelines in question. (see TGP/7 “Development of Test Guidelines”: Section 2.4)
TG	Test Guidelines
TG Drafter’s Kit	see Drafter’s kit for Test Guidelines
TG Template	UPOV has developed a template (“ <i>TG Template</i> ”) containing the universal standard wording which is appropriate for all UPOV Test Guidelines and which is prepared in the appropriate format. The TG Template is presented in document TGP/7 “Development of Test Guidelines”, Annex 1.
TGP documents	series of documents associated to the General Introduction specifying Test Guidelines’ Procedures (see General Introduction, Chapter 1 and Annex)
TWA	<i>UPOV Technical Working Party for Agricultural Crops (see “[...]” website reference to be provided)</i>
TWC	<i>UPOV Technical Working Party on Automation and Computer Programs (see “[...]” website reference to be provided)</i>
TWF	<i>UPOV Technical Working Party for Fruit Crops (see “[...]” website reference to be provided)</i>
TWO	<i>UPOV Technical Working Party for Ornamental Plants and Forest Trees (see “[...]” website reference to be provided)</i>
TWP	<i>UPOV Technical Working Party (see “[...]” website reference to be provided)</i>
TWV	<i>UPOV Technical Working Party for Vegetables (see “[...]” website reference to be provided)</i>
Uniformity	Article 8 “ <i>Uniformity</i> ” of the 1991 Act states: “The variety shall be deemed to be uniform if, subject to the variation that may be expected from the particular features of its propagation, it is sufficiently uniform in its relevant characteristics.”
UPOV	International Union for the Protection of New Varieties of Plants
UPOV code	see UPOV Code System
UPOV Code System	The main purpose of the UPOV Code System is to enhance the usefulness of the UPOV-ROM Plant Variety Database (“UPOV-ROM”) by overcoming the problem of synonyms for plant taxa. That is achieved by attributing each taxa a code according to the UPOV Code System (“UPOV code”); synonyms for the same plant taxa are attributed the same UPOV code. An explanation of the UPOV Code System is provided at (“[...]” website reference to be provided)

UPOV member	see “ <i>member of the Union</i> ”
UPOV-ROM	UPOV-ROM Plant Variety Database
Variety	Article 1(vi) of the 1991 Act states that: “(vi) “variety” means a plant grouping within a single botanical taxon of the lowest known rank, which grouping, irrespective of whether the conditions for the grant of a breeder’s right are fully met, can be <ul style="list-style-type: none"> - defined by the expression of the characteristics resulting from a given genotype or combination of genotypes, - distinguished from any other plant grouping by the expression of at least one of the said characteristics and - considered as a unit with regard to its suitability for being propagated unchanged;”
Variety collection	a collection of varieties of common knowledge which are relevant for the examination of distinctness of candidate varieties (see document TGP/4 “Constitution and [Management] / [Maintenance] of Variety Collections”)
Variety denomination	The UPOV Convention requires that a variety shall be designated by a denomination which will be its generic designation. (see Article 20 (1) of the 1991 Act / Article 13 (1) of the 1978 Act)
Variety of common knowledge	an abbreviation of “variety whose existence is a matter of common knowledge at the time of the filing of the application”. (see Distinctness)
VG, VS, MG, MS	<i>explanation to be provided from TGP/9 “Examining Distinctness”</i>
Working Group on Biochemical and Molecular Techniques, and DNA-Profiling in Particular	<i>UPOV Working Group on Biochemical and Molecular Techniques, and DNA-Profiling in Particular (BMT) (see “[...]” website reference to be provided)</i>

*Terms to be **excluded** from TGP/14*

Non-UPOV specific terms: for example, “vegetatively propagated”, “cross-pollinated”, “self-pollinated”, “seed-propagated”, “hybrid”, etc.

Terms in the UPOV Convention which are not explained in the General Introduction or other TGP documents: for example, “features of propagation”

[End of Section 1]

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- ^a The TC agreed that the title of Section 1 should be reviewed if the content extended beyond technical terms, as was the case for the terms currently included.
- ^b The TWC proposed to be deleted, because the term is included in Section 3 “Statistical Terms”.
- ^c The TWC proposed that the explanation should correspond to the explanation in document TGP/8.
- ^d The TWA proposed to include the explanation of “relevant characteristics” provided in document TGP/10, Section 1.2.