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

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

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**WORKING PAPER ON DRAFT TEST GUIDELINES FOR SAIN TOHN'S WORT  
(*HYPERICUM L.*)**

*Document prepared by experts from the Netherlands*

The attached document TG/HYPERI(proj.1) already incorporates the standard wording of document TGP/7.2, which was adopted by the Technical Committee at its thirty-eighth session in April 2002, and includes some additional standard wording from document TGP/7.1 Draft 1, also agreed at that session.

[Document TG/HYPERI(proj.1) follows]





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

**SAINT JOHN'S WORT** \*

*(Hypericum L.)*

(Berry producing species)

**GUIDELINES**

**FOR THE CONDUCT OF TESTS**

**FOR DISTINCTNESS, UNIFORMITY AND STABILITY**

Alternative Names: \*

Latin	English	French	German	Spanish
<i>Hypericum L.</i>	Saint John's Wort, Rose of Sharon	Millepertuis	Johanniskraut	Corazoncillo, Hierba de San Juan

**ASSOCIATED DOCUMENTS**

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

\* These names 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](http://www.upov.int)), for the latest information.]

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1. SubjectoftheseGuidelines

These Test Guidelines apply to all varieties of *Hypericum hircinum* L., *H. androsaemum* L. and *H. xinodorum* Mill., non Willd., of the family *Clusiaceae*.

2. MaterialRequired

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 to be supplied in the form of young plants.

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

10 plants of normal commercial standard.

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. MethodofExamination

3.1 *DurationofTests*

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

3.2 *TestingPlace*

The tests should normally be conducted at one place. If any characteristics of the variety, which are relevant for the examination of DUS, cannot be seen at that place, the variety may be tested at an additional place.

3.3 *ConditionsforConductingtheExamination*

3.3.1 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. In particular, unless otherwise stated, all observations should be made on typical organs at the time when the berries are at their full colour (harvest time).

3.3.2 The tests should be carried out in the field under the following growing conditions:

- Planting time: the second half of May (Northern Hemisphere)
- Soil: well-drained fertile soil
- Planting distance: 4 plants per m<sup>2</sup>
- Irrigation: according to need

3.3.3 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.

#### 3.4 *Test Design*

3.4.1 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.

3.4.2 Each test should be designed to result in a total of, at least 10 plants.

#### 3.5 *Number of Plants/Parts of Plants to be Examined*

Unless otherwise indicated, all observations determined by measuring or counting should be made on 10 plants or parts taken from each of 10 plants.

#### 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 minimum duration of tests recommended in section 3.1 reflects, in general, the need to ensure that any differences in a characteristic are sufficiently consistent.

#### 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

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

4.2.2 The acceptable number of off-type plants tolerated in a sample size of 10 plants is 1 on the basis of a population standard of 1% and an acceptance probability of 95.

#### 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 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.

### 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 is 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 others 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 trials so that similar varieties are grouped together.

5.3 The following have been agreed as useful grouping characteristics:

- (a) Plant: habit (characteristic 1)
- (b) Berry: shape (characteristic 31)
- (c) Berry: main color (characteristic 35)

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 Section 6.1.2
- (+) See Explanations on the Table of Characteristics in Chapter 8.
- (QL) Qualitative characteristic –see Section 6.3
- (QN) Quantitative characteristic –see Section 6.3
- (PQ) Pseudo-Qualitative characteristic –see Section 6.3



7. TableofCharacteristics/Tableaudecaractères/Merkmalstabelle/Tabladecaracteres

English	français	deutsch	español	ExampleVarieties Exemples Beispielssorten Variedadesejemplo	Note/ Nota
<b>1. Plant:habit</b>					
(*)					
erect					1
moderatlyspreading					2
stronglyspreading					3
<b>2. Plant:height</b>					
(*)					
low					3
medium					5
high					7
<b>3. Plant:width</b>					
(*)					
narrow					3
medium					5
broad					7
<b>4. Plant:branchesof thisyear:reddishor brownishcoloration</b>					
(*)					
absent					1
present					2
<b>5. Plant:branchesof thisyear:reddishor brownishcolo ration: intensityofcolor</b>					
(*)					
weak					3
medium					5
strong					7

English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
<b>6. Leaf:length</b>					
<b>(*)</b>					
short					3
medium					5
long					7
<b>7. Leaf:width</b>					
<b>(*)</b>					
narrow					3
medium					5
broad					7
<b>8. Leaf:greencolor</b>					
<b>(*)</b>					
light					3
medium					5
dark					7
<b>9. Leaf:reddishor</b>					
<b>(*) brownishcoloration</b>					
absent					1
present					2
<b>10. Leaf:reddishor</b>					
<b>(*) brownishcoloration:</b>					
<b>intensityofcolor</b>					
weak					3
medium					5
strong					7
<b>11. Leaf:surface</b>					
convex					1
flat					2

English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
<b>12. Leaf: angle with (* ) branches</b>					
sharp					1
right angle or nearly right angle					2
<b>13. Leaf: longitudinal axis</b>					
straight or nearly so					1
recurved					2
<b>14. Leaf: shape of top (* )</b>					
acute					1
round					2
<b>15. Leaf: smell</b>					
absent					1
present					2
<b>16. Inflorescence: (* ) density of flowers</b>					
loose					3
medium					5
dense					7
<b>17. Inflorescence: length (* )</b>					
short					3
medium					5
long					7
<b>18. Inflorescence: width (* )</b>					
narrow					3
medium					5
broad					7

English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
<b>19. Flower: size</b>					
<b>(*)</b>					
small					3
medium					5
large					7
<b>20. Sepals: length of largestone</b>					
short					3
medium					5
long					7
<b>21. Sepals: width of largestone</b>					
narrow					3
medium					5
broad					7
<b>22. Sepals: reddish or brownish color</b>					
<b>(*)</b>					
absent					1
present					9
<b>23. Sepals: reddish or brownish color: intensity of color</b>					
weak					3
medium					5
strong					7
<b>24. Sepals: position to ovary</b>					
horizontal					1
recurved					2
strongly recurved					3

English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
<b>25. Corolla:size</b>					
<b>(*)</b>					
small					3
medium					5
large					7
<b>26. Corolla:color</b>					
<b>(*)</b>					
RHSColourChart (indicatereference number)					
<b>27. Anthers:color</b>					
<b>(*)</b>					
yellow					1
orange					2
<b>28. Ovary:style:length</b>					
short					3
medium					5
long					7
<b>29. Ovary:stigma:red color</b>					
absent					1
present					2
<b>30. Berry:size</b>					
<b>(*)</b>					
small					3
medium					5
large					7

English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
<b>31. Berry:shape</b>					
(*)					
narrow-elliptic					1
elliptic					2
broad-elliptic					3
round					4
narrow-ovate					5
ovate					6
broad-ovate					7
<b>32. Berry:crosssection</b>					
(*)					
round					1
triangular					2
present					3
<b>33. Berry:indentation</b>					
(*) oftop					
absent					1
present					9
<b>34. Berry:texture(top</b>					
(*) excluded)					
smooth					1
grooved					2
indented					3

English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
<b>35. Berry:maincolor</b>					
(*)					
white					1
green					2
yellow					3
orange-pink					4
lightpink					5
pink					6
darkpink					7
red-pink					8
orange-red					9
lightred					10
red					11
darkred					12
red-purple					13
red-brown					14
purple-brown					15
brown					16
grey-brown					17
<b>36. Berry:glossiness</b>					
weak					1
medium					2
strong					3

8. Literature

H.J. van Laar. Hypericum - Hertshooi, het in Nederland gekweekte sortiment, Dendroflora  
Nr 33, 1996 pag. 27 - 56. Printed by: Koninklijke Vereniging voor Boskoopse Culturen &  
Nederlandse Dendrologische Vereniging. ISSN:0374 -7247



9. TechnicalQuestionnaire

TECHNICALQUESTIONNAIRE	Page {x} of {y}	ReferenceNumber:
		Applicationdate: (nottobefilledinbytheapplicant)
TECHNICALQUESTIONNAIRE tobecompletedinconnectionwithanapplicationforplantbreeders'rights		
1. SubjectoftheTechnicalQuestionnaire		
1.1 LatinName	<input type="text" value="Hypericum L."/>	
1.2 CommonName	<input type="text" value="SAINTJOHN'SWORT"/>	
1.2 Species(pleasecomplete)		
1.2.1 LatinName	<input type="text"/>	
1.2.2 CommonName	<input type="text"/>	
2. Applicant		
Name	<input type="text"/>	
Address	<input type="text"/>	
TelephoneNo.	<input type="text"/>	
FaxNo.	<input type="text"/>	
E-mailaddress	<input type="text"/>	
Breeder(ifdifferentfromapplicant)	<input type="text"/>	

TECHNICALQUESTIONNAIRE	Page{x}of{y}	ReferenceNumber:
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3. Proposeddenominationandbreeder'sreference

Proposeddenomination  
(ifavailable)

Breeder'sreference

4. Informationont hebreedingschemeandpropagationofthevariety

4.1 BreedingScheme

4.1.1 Varietyresultingfrom:

(a) controlledcross   
(pleasestateparentvarieties)

(b) partiallyunknowncross   
(pleasestateknownparentvariety(ies))

(c) totallyunk nowncross

4.1.2 Mutation   
(pleasestateparentvariety)

4.1.3 Discovery   
(pleasestatewhere,whenandhowdeveloped)

4.1.4 Other   
(pleaseprovidedetails)

4.2 MethodofPropagatingtheVariety

(a) cuttings

(b) *invitro* propagation

(c) other(pleaseprovidedetails)

TECHNICALQUESTIONNAIRE	Page{x}of{y}	ReferenceNumber:
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5. Characteristics of the variety to be indicated (the number in brackets refers to the corresponding characteristic in Test Guidelines; please mark the one which best corresponds).

	Characteristics	Example Varieties	Note
<b>5.1</b>	<b>Plant:habit</b>		
<b>(1)</b>			
	erect		1[]
	moderately spreading		2[]
	strongly spreading		3[]
<b>5.2</b>	<b>Berry:shape</b>		
<b>(31)</b>			
	narrow-elliptic		1[]
	elliptic		2[]
	broad-elliptic		3[]
	round		4[]
	narrow-ovate		5[]
	ovate		6[]
	broad-ovate		7[]

Characteristics		ExampleVarieties		Note
<b>5.3</b>	<b>Berry:maincolor</b>			
<b>(35)</b>				
	white			1[]
	green			2[]
	yellow			3[]
	orange-pink			4[]
	lightpink			5[]
	pink			6[]
	darkpink			7[]
	red-pink			8[]
	orange-red			9[]
	lightred			10[]
	red			11[]
	darkred			12[]
	red-purple			13[]
	red-brown			14[]
	purple-brown			15[]
	brown			16[]
	grey-brown			17[]
<b>6. Similarvarietiesanddifferencesfromthesevarieties</b>				
Denomination(s)of variety(ies)similarto yourcandidatevariety	Characteristic(s)in whichyourcandidate varietydiffersfrom thesimilarvariety(ies)	Describetheexpression ofthecharacteristic(s) forthesimilar variety(ies)	Describetheexpression ofthe characteristic(s) foryourcandidate variety	
<i>(Example)</i>	<i>Plant:height</i>	<i>e.g. note3</i>	<i>note7</i>	
		<i>e.g. short</i>	<i>tall</i>	
		<i>e.g. 90cm</i>	<i>130cm</i>	

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 Special conditions for the examination of the variety

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

Yes  No

7.2.2 If yes, please give details:

7.3 Other information

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.

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

Applicant's name

Signature

Date

[End of document]