



**European Union
Community Plant Variety Office**

PROTOCOL FOR DISTINCTNESS, UNIFORMITY AND STABILITY TESTS

Salix L.

WILLOW

UPOV Species Code: SALIX

Adopted on 15/11/2006

I - SUBJECT OF THE PROTOCOL

The protocol describes the technical procedures to be followed in order to meet the requirement of Council Regulation 2100/94 on Community Plant Variety Rights. The technical procedures have been agreed by the Administrative Council and are based on general UPOV Document TG/1/3 and UPOV Guideline TG/72/6 dated 5th April 2006 for the conduct of tests for Distinctness, Uniformity and Stability. This protocol applies to all varieties of *Salix L.* of the family *Salicaceae*.

II - SUBMISSION OF PLANT MATERIAL

1. The Community Plant Variety Office (CPVO) is responsible for informing the applicant of:

- the closing date for the receipt of plant material;
- the minimum amount and quality of plant material required;
- the examination office to which material is to be sent.

The applicant is responsible for ensuring compliance with any customs and plant health requirements.

2. Final dates for receipt of documentation and material by the Examination Office:

The final dates for receipt of requests, technical questionnaires and the final date or submission period for plant material will be decided by the CPVO and each Examination Office chosen.

The Examination Office is responsible for immediately acknowledging the receipt of requests for testing, and technical questionnaires. If no or unsatisfactory plant material is submitted the CPVO should be informed as soon as possible.

3. Plant material requirements:

Information with respect to closing dates and submission requirements of plant material for the technical examination of varieties can be found on the CPVO website (www.cpvo.europa.eu) and in the special Issue S2 of the Official Gazette of the Office published yearly in the month of September.

Quality : The plant material supplied should be visibly healthy, not lacking in vigour or affected by any important pest or disease, especially virus, as laid down in Council Directive 2000/29/EC and its amendments, or organisms impairing quality as indicated in Council Directive 98/56/EEC and Commission Directive 93/49/EEC and their amendments.

The plant material must not have undergone any treatment unless the CPVO and the examination office allow or request such treatment. If it has been treated, full details of the treatment must be given

Labelling of sample: - Species
- File number of the application allocated by the CPVO
- Breeder's reference
- Examination reference (if known)
- Name of applicant
- The phrase "On request of the CPVO".

III - CONDUCT OF TESTS

1. Variety collection:

A variety collection will be maintained for the purpose of establishing distinctness of the candidate varieties in test. A variety collection may contain both living material and descriptive information. A variety will be included in a reference collection only if plant material is available to make a technical examination.

Pursuant to Article 7 of Council Regulation No. 2100/94, the basis for a collection should be the following:

- varieties listed or protected at the EU level or at least in one of the EEA Member States;
- varieties protected in other UPOV Member States;
- any other variety in common knowledge.

It is the responsibility of Examination Office to keep the variety collection up to date.

2. Material to be examined:

Candidate varieties will be directly compared with other candidates for Community plant variety rights tested at the same Examination Office, and with appropriate varieties in the variety collection. When necessary an Examination Office may also include other candidates and varieties.

3. Characteristics to be used:

The characteristics to be used in DUS tests and preparation of descriptions shall be those referred to in Annex 1. All the characteristics shall be used, providing that observation of a characteristic is not rendered impossible by the expression of any other characteristic, or the expression of a characteristic is prevented by the environmental conditions under which the test is conducted. In the later case, the CPVO should be informed. In addition the existence of some other regulation e.g. plant health, may make the observation of the characteristic impossible.

The Administrative Council empowers the President, in accordance with Article 23 of Commission Regulation N° 1239/95, to insert additional characteristics and their expressions in respect of a variety.

4. Grouping of varieties:

The varieties and candidates to be compared will be divided into groups to facilitate the assessment of distinctness. Characteristics which are suitable for grouping purposes are those which are known from experience not to vary, or to vary only slightly, within a variety and which in their various states of expression are fairly evenly distributed throughout the collection. In the case of continuous grouping characteristics overlapping states of expression between adjacent groups is required to reduce the risks of incorrect allocation of candidates to groups. The character used for grouping is the following one:

- (a) Plant: sex (characteristic 1)

5. Trial designs and growing conditions:

The minimum duration of tests will normally be two growing cycles if the results on distinctness and uniformity are conclusive. Tests will be carried out under conditions ensuring normal growth. The size of the plots will be such that plants or parts of plants may be removed for measuring and counting without prejudice to the observations which must be made up to the end of the growing period.

The test design is as follows:

As a minimum, each test should include a total of 10 plants. Separate plots for observation and for measuring can only be used if they have been subject to similar environmental conditions.

All observations on single plants for vegetatively propagated varieties determined by measurement or counting should be made on 10 plants or parts taken from each of 10 plants and any other observations made on all plants in the test.

The test should normally be conducted at one place.

The test should be carried out in the open, under conditions ensuring normal growth.

6. Special tests:

In accordance with Article 83(3) of Council Regulation No. 2100/94 an applicant may claim either in the Technical Questionnaire or during the test that a candidate has a characteristic which would be helpful in establishing distinctness. If such a claim is made and is supported by reliable technical data, a special test may be undertaken providing that a technically acceptable test procedure can be devised.

Special tests will be undertaken, with the agreement of the President of CPVO, where distinctness is unlikely to be shown using the characters listed in the protocol.

7. Standards for decisions:

a) Distinctness

A candidate variety will be considered to be distinct if it meets the requirements of Article 7 of Council Regulation No. 2100/94.

b) Uniformity

For the assessment of uniformity of vegetatively propagated varieties and seed-propagated varieties which are self-pollinated, a population standard of 1% with an acceptance probability of at least 95% should be applied.

For a sample size between 6 and 35 plants for vegetatively propagated varieties, only 1 off-type is allowed.

For the assessment of uniformity of seed propagated open pollinated and hybrid varieties, relative uniformity standards should be applied.

c) Stability

A candidate will be considered to be sufficiently stable when there is no evidence to indicate that it lacks uniformity.

IV - REPORTING OF RESULTS

After each growing cycle the results will be summarised and reported to the CPVO in the form of a UPOV model interim report in which any problems will be indicated under the headings distinctness, uniformity and stability. Candidates may meet the DUS standards after one growing cycle but in some cases two or more growing cycles may be required. When tests are completed the results will be sent by the Examination Office to the CPVO in the form of a UPOV model final report.

If it is considered that the candidate complies with the DUS standards, the final report will be accompanied by a variety description in the format recommended by UPOV. If not the reasons for failure and a summary of the test results will be included with the final report.

The CPVO must receive interim reports and final reports by the date agreed between the CPVO and the examination office.

Interim reports and final examination reports shall be signed by the responsible member of the staff of the Examination Office and shall expressly acknowledge the exclusive rights of disposal of CPVO.

V - LIAISON WITH THE APPLICANT

If problems arise during the course of the test the CPVO should be informed immediately so that the information can be passed on to the applicant. Subject to prior agreement, the applicant may be directly informed at the same time as the CPVO particularly if a visit to the trial is advisable.

The interim report and final report shall be sent by the Examination Office to the CPVO.

ANNEXES TO FOLLOW

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List of characteristics to be observed	8
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 <u>Legend:</u> QL Qualitative characteristic QN Quantitative characteristic PQ Pseudo-qualitative characteristic (a) - (d) See Explanations on the Table of characteristics (+) See Explanations on the Table of characteristics	
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ANNEX II

Technical Questionnaire

ANNEX I

TABLE OF CHARACTERISTICS

CPVO N°	UPOV N°	Characteristics	Examples	Note	
1.	1. QL	(a) Plant: sex	dioecious female	Tora	1
			dioecious male	Björn	2
			monoecious unisexual		3
			monoecious hermaphrodite		4
2.	2. QN	(a) Plant: spring foliation	very early	I - 3 - 58	1
			early	Godesberg	3
			medium	Metz	5
			late	F - 65 - 02	7
			very late	Mangahn	9
3.	3. PQ	(b) Main shoot: attitude	straight	Bredevoort	1
			slightly curved	I - 3 - 58	2
			moderately curved	Mittlerer Inn V	3
			strongly curved	75/64 (<i>S. fragilis</i> L.)	4
			tortuous	Tortuosa	5

CPVO N°	UPOV N°	Characteristics	Examples	Note	
4.	4. PQ	(b) Main shoot: colour in (c) middle third (sunny side)	yellow		1
			orange	Gelbe Dotterweide	2
			grey		3
			grey green		4
			light green	Graupa 34	5
			medium green	259/64 (<i>S. x smithiana</i> Willd.)	6
			brown green	I – 3 – 58	7
			grey brown		8
			red brown	Altenstadt 4	9
			brown	Straubinger Baumweide II	10
5.	5. QN	(b) Main shoot: hairiness (c)	absent or very weak	Tordis	1
			weak		3
			medium		5
			strong	Osk	7
			very strong		9
6.	6. (+) QN	(b) Main shoot: protrusion of lenticels	absent or very weak		1
			weak	Olaf	3
			medium		5
			strong	Sherwood	7
			very strong		9

CPVO N°	UPOV N°	Characteristics	Examples	Note	
7.	7. PQ	(b) Main shoot: colour of (c) leaf bud	light green		1
			medium green		2
			greenish brown	Gustaf	3
			brown	Björn, Orm	4
			reddish brown	Stott 10	5
8.	8. QN	(b) Main shoot: hairiness of (c) leaf bud	absent or very weak	Armando	1
			weak	Sherwood	3
			medium	Nils	5
			strong	Stott 10	7
			very strong	Osk	9
9.	9. QN	(b) Main shoot: number of branches longer than 5 cm	absent or very few	Altenstadt 4	1
			few	Mittlerer Inn III	3
			medium	Bredevoort	5
			many	Belders	7
			very many	I - 3 - 58	9
10.	10. QN	(b) Branch: angle between first 5 cm of branch and main shoot in middle third of main shoot	very small		1
			small	Resolution	3
			medium	Karin	5
			large	Doris	7
			very large		9

CPVO N°	UPOV N°	Characteristics	Examples	Note		
11.	11.	(b) Branch: attitude				
			PQ	curved up	Orm	1
				straight	Olaf	2
				drooping	Pendula	3
		first curved down, then curved up		4		
12.	12.	(b) Branch: colour (sunny side)				
			PQ	yellow green		1
				grey green	Unn	2
				green		3
				grey brown	Stott 10	4
				red brown	Boberg	5
		brown	Karin	6		
13.	13.	(d) Leaf blade: length of midrib				
			QN	very short	Armando	1
				short	Vidi	3
				medium	Doris	5
				long	A. Parfitt	7
		very long		9		
14.	14.	(d) Leaf blade: width				
			QN	very narrow	Armando	1
				narrow	Karin	3
				medium	A. Parfitt	5
				broad	Vidi	7
		very broad		9		
15.	15.	(d) Leaf blade: position of maximum width				

CPVO N°	UPOV N°	Characteristics	Examples	Note
	QN	below middle	Karin	1
		approximately at middle	Vidi	2
		above middle	Pendula	3
16.	16.	(d) Leaf blade: shape of base		
	(+)			
	PQ	acuminate		1
		acute	Prinzeninsel Plön	2
		rounded	Super White	3
		obtuse		4
		truncate		5
		cordate	SHS	6
17.	17.	(d) Leaf blade: colour of upper side		
	PQ	yellow green	Gold Leaf	1
		light green		2
		medium green	Flamingo, Hild	3
		dark green		4
		grey green		5
		blue green		6
		red green		7

CPVO N°	UPOV N°	Characteristics	Examples	Note	
18.	18.	(d) Leaf blade: hairiness of <u>upper</u> side			
			absent or very weak	Flamingo	1
			weak	Aud	3
			medium	Hild	5
			strong		7
		very strong		9	
19.	19.	(d) Leaf blade: hairiness of <u>lower</u> side			
			absent or very weak		1
			weak	Flamingo	3
			medium		5
			strong		7
		very strong	Ivar, Sherwood	9	
20.	20.	(d) Petiole: length			
			very short		1
			short	F-65-02	3
			medium	Garonne 47	5
			long	259/64 (<i>S. x smithiana</i> Willd.)	7
		very long		9	
21.	21.	(d) Petiole: colour of upper side			
			yellow green		1
			green		2
			red green		3
		violet green	F-65-02, Garonne 47	4	

CPVO N°	UPOV N°	Characteristics	Examples	Note	
22.	22. QN	(d) Stipule: length	very short	1	
			short	259/64 (<i>S. x smithiana</i> Willd.)	3
			medium	Super White	5
			long	Mangahn	7
			very long	Jodis	9
23.	23. (+) PQ	(d) Stipule: type	type 1	1	
			type 2	2	
			type 3	3	

EXPLANATIONS AND METHODS

Explanations covering several characteristics

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

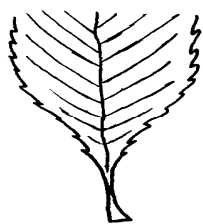
- (a) Observations on the plant sex and spring foliation should be made at beginning of growth after winter dormancy.
- (b) All observations on the main shoot and the branches should be made in autumn.
- (c) Hairiness and colour of the main shoot and the leaf bud should be observed at 20 cm from the tip of the main shoot.
- (d) All observations on the leaf should be made in the middle of the growing period on leaves of the middle third of the main shoot.

Explanations for individual characteristics

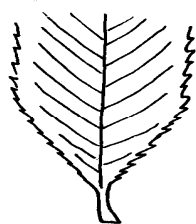
Ad. 6: Main shoot: protrusion of lenticel

To be observed in the middle third of the main shoot.

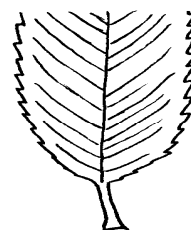
Ad. 16: Leaf blade: shape of base



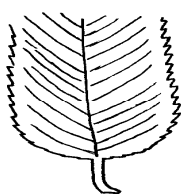
1
acuminate



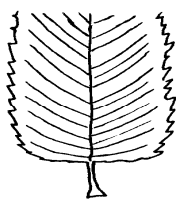
2
acute



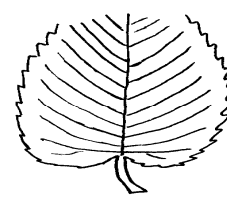
3
rounded



4
obtuse



5
truncate



6
cordate

Ad. 23: Stipule: type



type 1



type 2



type 3

LITERATURE

Newsholme, Christopher: Willows, the genus Salix, London, B. T. Batsford Ltd., Great Britain, 1992

Schiechl, H. M.: Weiden in der Praxis, Patzer Verlag, Hannover, 1992

ANNEX II

The Technical Questionnaire is available on the CPVO website under the following reference:
CPVO-TQ/072/2