



**European Union
Community Plant Variety Office**

PROTOCOL FOR DISTINCTNESS, UNIFORMITY AND STABILITY TESTS

Sutera Roth

SUTERA

UPOV Species Code: SUTER

Jamesbrittenia O. Kuntze

JAMESBRITTENIA

UPOV Species Code: JAMES

Adopted on 14th November 2007

I - SUBJECT OF THE PROTOCOL

The protocol describes the technical procedures to be followed in order to meet the requirement of Council Regulation (EC) No. 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/232/1 dated 28th March 2007 for the conduct of tests for Distinctness, Uniformity and Stability. This protocol applies to all vegetatively propagated varieties of *Sutera Roth* and *Jamesbrittenia O. Kuntze* of the family *Scrophulariaceae* and hybrids between them.

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 (EC) No. 2100/94, the basis for a collection should be the following:

- varieties listed or protected at the EU level;
- 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 latter 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 (EC) No. 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 characters used for grouping are the following:

- (a) Leaf blade: variegation (characteristic 13)
- (b) Flower: type (characteristic 15)
- (c) Corolla: number of colours (excluding mouth of corolla tube) (characteristic 18)
- (d) Corolla: main colour (characteristic 19) with the following groups:
 - Gr. 1: white
 - Gr. 2: pink
 - Gr. 3: red
 - Gr. 4: purple
 - Gr. 5: violet

5. Trial designs and growing conditions

The minimum duration of tests will normally be one growing cycle 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 15 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 on the flower in the position where the median inner segment is upwards. All observations on the segments have to be made on the upper side of the segment.

Any other observations should be 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 (EC) No. 2100/94 an applicant may claim either in the Technical Questionnaire or during the examination that a candidate variety 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 (EC) No. 2100/94.

b) **Uniformity**

For the assessment of uniformity a population standard of 1% with an acceptance probability of at least 95% should be applied.

For vegetatively propagated varieties for a sample size between 6 and 35 plants, 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 from the Examination Office 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
Explanations on the table of characteristics	13
Legend:	
QL Qualitative characteristic	
QN Quantitative characteristic	
PQ Pseudo-qualitative characteristic	
(a) – (c) See explanations on the Table of characteristics	
(+) See explanations on the Table of characteristics	
(*): Important characteristic to be included in the UPOV variety description	
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ANNEX II

Technical questionnaire

ANNEX I

TABLE OF CHARACTERISTICS

CPVO N°	UPOV N°	Characteristics	Examples	Note
1. QN	1. (* QN	Plant: height		
		very short	Giwhisto 12	1
		short		3
		medium	Yasflos	5
		tall	Sumsut 02	7
2. QN	2. (* QN	Shoot: length		
		short	Wesbadream	3
		medium	Giwhisto 12	5
		long	Dancoplace	7
3. (+) QN	3. (+) QN	Shoot: length of internodes		
		short	Gicomwhi 14	3
		medium	Giwhisto 12	5
		long	Yaspea	7
4. (+) QN	4. (+) QN	Shoot: anthocyanin coloration		
		absent or very weak		1
		weak	Sumsut 03	3
		medium		5
		strong	Novasnow	7
		very strong		9

CPVO N°	UPOV N°	Characteristics	Examples	Note	
5. QN	5. QN	Petiole: length (a)	absent or very short	1	
			short	Sumsut 03	3
			medium		5
			long	Dancop 18	7
6. (+)	6. (* (+)	Leaf: type (a)	simple	1	
			pinnate	2	
7. (+)	7. (* (+)	Leaf blade: length (a)	short	Wesbadream	3
			medium	Eskimo	5
			long	Giwhisto 12	7
8. (+)	8. (* (+)	Leaf blade: width (a)	narrow	Wesbadream	3
			medium	Eskimo	5
			broad	Giwhisto 12	7
9. QN	9. QN	Leaf blade: ratio length/width (a)	small		3
			medium		5
			large		7
10. (+)	10. (+)	Leaf blade: position of broadest part (a)	in middle		1
			between middle and base		2
			at base		3

CPVO N°	UPOV N°	Characteristics	Examples	Note
11. (+)	11. (+)	<u>Only varieties with simple leaves:</u> Leaf blade: depth of incisions of margin		
QN	QN	(a)	absent or very shallow	1
			shallow	3
			medium	5
			deep	7
12.	12.	Young leaf blade: main colour (if clearly different from colour of fully developed leaf blade)		
QL	QL	(b)	white	1
			yellow	2
			Dancop 15	
13.	13. (*)	Leaf blade: variegation		
QL	QL	(a)	absent	1
			present	9
			Wesbadream	
			Olympic Gold	
14.	14.	Leaf blade: main colour		
PQ	PQ	(a)	yellow	1
		(b)	light green	2
			medium green	3
			dark green	4
			Dancop 15	
			Eskimo	
15. (+)	15. (*) (+)	Flower: type		
QL	QL		single	1
			double	2
			Wesbadream	
			Sumsut 03	
16. (+)	16. (*) (+)	Flower: length		
QN	QN		short	3
			medium	5
			long	7

CPVO N°	UPOV N°	Characteristics	Examples	Note
17. (+)	17. (* (+)	Flower: width		
QN	QN	very narrow		1
		narrow	Wesbadream	3
		medium	Wesbavio	5
		broad	Giwhisto 12	7
		very broad		9
18. (+)	18. (* (+)	Corolla: number of colours (excluding mouth of corolla tube)		
QL	QL	one	Wesbadream	1
		two	Dancop 18	2
		more than two		3
19. (+) PQ	19. (* (+) PQ	Corolla: main colour		
		RHS Colour Chart (indicate reference number)		
20. (+)	20. (* (+)	Corolla: secondary colour		
PQ	PQ	white	Dancop 18	1
		yellow		2
		dark pink		3
		dark purple	Yagemag	4
		dark violet	Dancop 17	5
21. (+)	21. (+)	Corolla lobe: width		
QN	QN (c)	narrow	Wesbadream	3
		medium	Wesbavio	5
		broad	Gicomwhi 14	7

CPVO N°	UPOV N°	Characteristics	Examples	Note
22. (+)	22. (* (+)	Corolla lobe: shape of apex		
PQ	PQ	(c)	pointed	1
			rounded	2
			truncate	3
			retuse	4
23. (+)	23. (+)	Corolla tube: length		
QN	QN		short	3
			medium	5
			long	7
24. (+)	24. (+)	<u>Only varieties with single flowers:</u> Corolla tube: main colour at mouth		
PQ	PQ		yellow	1
			yellow orange	2
			orange	3

EXPLANATIONS ON THE TABLE OF CHARACTERISTICS

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) Observations on the leaf should be made on the fully developed basal leaf (leaf located at the base of the shoot).
- (b) The main colour is the colour with the largest area. In cases where the relative areas are equal, the darker colour is the main colour.
- (c) Observations on the corolla lobe of double flowers should be made on the largest lobe.

Explanations for individual characteristics

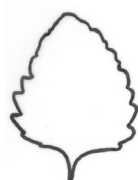
Ad. 3: Shoot: length of internodes

Observations on the internode length should be made in the middle third of the shoot.

Ad. 4: Shoot: anthocyanin coloration

Observations on anthocyanin coloration should be made on the upper third of the shoot.

Ad. 6: Leaf: type



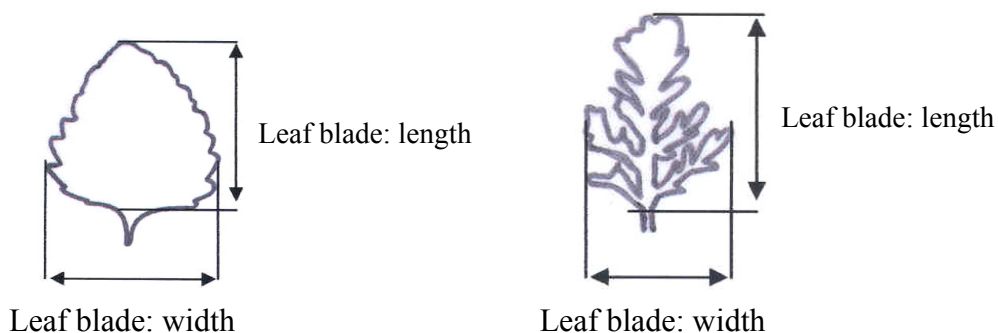
1
simple



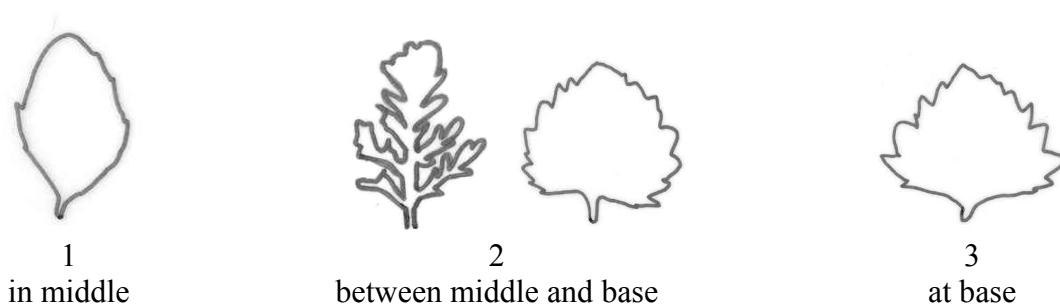
2
pinnate

Ad. 7: Leaf blade: length

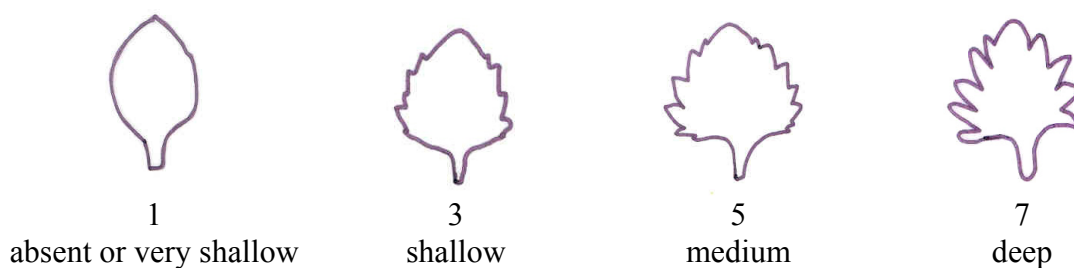
Ad. 8: Leaf blade: width



Ad. 10: Leaf blade: position of broadest part



Ad. 11: Only varieties with simple leaves: Leaf blade: depth of incisions of margin



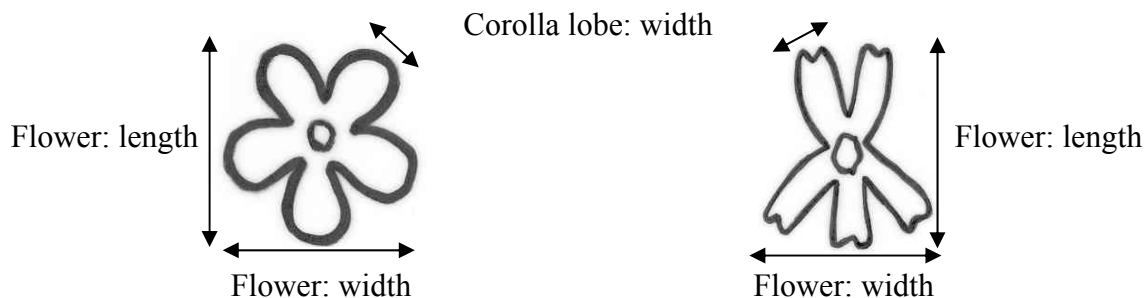
Ad. 15: Flower: type

A single flower has only 5 corolla lobes. A double flower has more than 5 corolla lobes.

Ad. 16: Flower: length

Ad. 17: Flower: width

Ad. 21: Corolla lobe: width

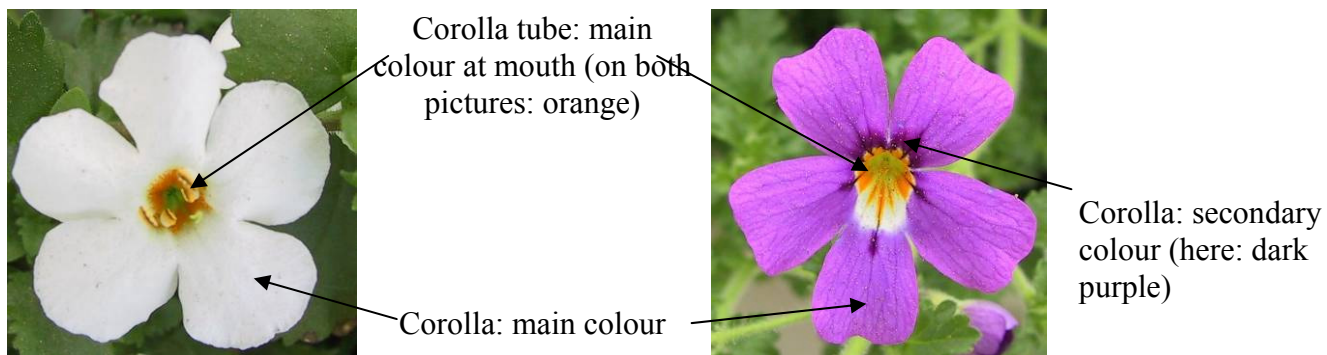


Ad. 18: Corolla: number of colours (excluding mouth of corolla tube)

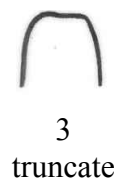
Ad. 19: Corolla: main colour

Ad. 20: Corolla: secondary colour

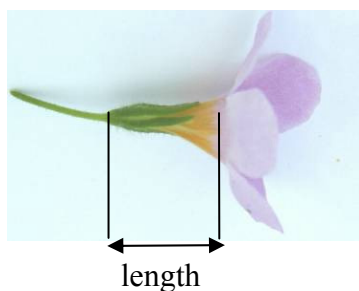
Ad. 24: Only varieties with single flowers: Corolla tube: main colour at mouth



Ad. 22: Corolla lobe: shape of apex



Ad. 23: Corolla tube: length



LITERATURE

Hilliard, O.M., 1994: The Manuleae. A Tribe of Scrophulariaceae, Edinburgh University Press.

ANNEX II



European Union
Community Plant Variety Office

TECHNICAL QUESTIONNAIRE

to be completed in connection with an application for Community Plant Variety Rights
Please answer all questions. A question without any answer will lead to a non-attribution
of an application date. In cases where a field / question is not applicable, please state so.

1. **Botanical taxon:** Name of the genus, species or sub-species to which the variety belongs and common name

Sutera Roth []

SUTERA (indicate species)

Jamesbrittenia O. Kuntze []

JAMESBRITTENIA (indicate species)

Hybrid []

(indicate species used in the crossing)

2. **Applicant(s):** Name(s) and address(es), phone and fax number(s), Email address, and where appropriate name and address of the procedural representative

.....

.....

3. Variety denomination

a) Where appropriate proposal for a variety denomination:

.....

b) Provisional designation (breeder's reference):

.....

4. Information on origin, maintenance and reproduction of the variety

4.1 Origin

(a) Seedling (indicate parent varieties)..... []

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(b) Mutation (indicate parent variety)..... []

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(c) Discovery (indicate where, when and how the variety has been developed): []

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(d) Other (please specify) []

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4.2 Method of propagation

- (a) Cuttings..... []
- (b) *In vitro* propagation..... []
- (c) Seed..... []
- (d) Other (please specify): []

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4.3 Other information:

In the case of seed propagated varieties: method of production:

- (a) Self-pollinated..... []
- (b) Cross-pollinated (please give details) []

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.....

- (c) Hybrid (please give details) []

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4.4 Geographical origin of the variety: the region and the country in which the variety was bred or discovered and developed

.....

5. Characteristics of the variety to be indicated (the number in brackets refers to the corresponding characteristic in the CPVO Protocol; please mark the state of expression which best corresponds).			
	Characteristics	Example varieties	Note
5.1 (13)	Leaf blade: variegation		
	absent	Wesbadream	1 []
	present	Olympic Gold	9 []
5.2 (15)	Flower: type		
	single	Wesbadream	1 []
	double	Sumsut 03	2 []
5.3 (17)	Flower: width		
	very narrow		1 []
	narrow	Wesbadream	3 []
	medium	Wesbavio	5 []
	broad	Giwhisto 12	7 []
	very broad		9 []
5.4 (18)	Corolla: number of colours (excluding mouth of corolla tube)		
	one	Wesbadream	1 []
	two	Dancop 18	2 []
	more than two		3 []
	Please fill in point (i) if possible, otherwise point (ii)		
5.5i (19)	Corolla: main colour		
	RHS Colour Chart (indicate reference number).....		

Characteristics		Example varieties	Note
5.5ii (19)	Corolla: main colour		
	white		1 []
	pink		2 []
	red		3 []
	purple		4 []
	violet		5 []
	other colour (indicate)		6 []
5.6 (20)	Corolla: secondary colour		
	white	Dancop 18	1 []
	yellow		2 []
	dark pink		3 []
	dark purple	Yagemag	4 []
	dark violet	Dancop 17	5 []
	other colour (indicate)	6 []
6. Similar varieties and differences from these varieties			
Denomination of similar variety	Characteristic in which the similar variety is different ¹⁾	State of expression of similar variety	State of expression of candidate variety
<p>¹⁾ In the case of identical states of expressions of both varieties, please indicate the size of the difference</p>			

7. Additional information which may help to distinguish the variety

A representative print-out colour photo of the variety **must** be added to the Technical Questionnaire.

7.1 Resistance to pests and diseases

7.2 Special conditions for the examination of the variety

YES, please specify

NO

7.3 Other information

YES, please specify

NO

8. GMO-information required

The variety represents a Genetically Modified Organism within the meaning of Article 2(2) of Council Directive 2001/18/EC of 12/03/2001.

YES NO

If yes, please add a copy of the written attestation of the responsible authorities stating that a technical examination of the variety under Articles 55 and 56 of the Basic Regulation 2100/94 does not pose risks to the environment according to the norms of the above-mentioned Directive.

9. Information on plant material to be examined

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) | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| (b) Chemical treatment (e.g. growth retardant or pesticide) | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| (c) Tissue culture | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| (d) Other factors | <input type="checkbox"/> Yes | <input type="checkbox"/> No |

Please provide details of where you have indicated "Yes":

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I/we hereby declare that to the best of my/our knowledge the information given in this form is complete and correct.

Date

Signature

Name

[End of document]