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UPOV

INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

GENEVA

DRAFT

SWEET POTATO

UPOV Code: IPOMO_BAT

Ipomoea batatas (L.) Lam.

*

GUIDELINES

FOR THE CONDUCT OF TESTS

FOR DISTINCTNESS, UNIFORMITY AND STABILITY

prepared by an expert from the Republic of Korea

to be considered by the

Technical Working Party for Ornamental Plants and Forest Trees
at its forty-first session, to be held in Wageningen, Netherlands, from June 9 to 13, 2008

Technical Working Party for Vegetables
at its forty-second session to be held in Cracow, Poland, from June 23 to 27, 2008

Technical Working Party for Agricultural Crops
at its thirty-seventh session, to be held in Nelspruit, South Africa, from July 14 to 18, 2008

Alternative Names:*

Botanical name	*English*	*French*	*German*	*Spanish*
Ipomoea batatas (L.) Lam	Sweet potato	Patate dulce, Patate douce ornementale	Batate, Süßkartoffel	Camote

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.

ASSOCIATED DOCUMENTS

These Test Guidelines should be read in conjunction with 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), for the latest information.]

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1. Subject of these Test Guidelines

These Test Guidelines apply to all varieties of all varieties of *Ipomoea batatas* (L.) Lam..

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 storage roots, of medium size of the variety or in the form of cuttings and, for ornamentals, in the form of rooted cuttings.

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

For varieties for non-ornamental use: 50 storage roots or 150 cuttings.
For varieties for ornamental use: 15 rooted cuttings.

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 a single growing cycle.

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

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.

3.3.2 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

3.4 Test Design

3.4.1 Each test should be designed to result in a total of at least 50 plants for varieties for non-ornamental use, which should be divided at least three replicates and at least 12 plants in case of varieties for ornamental use.

3.4.2 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.

3.5 Number of Plants / Parts of Plants to be Examined

Unless otherwise indicated, all observations in case of varieties for non-ornamental use should be made on 30 plants or parts taken from each of 30 plants. In the case of varieties for ornamental use all observations should be made on 10 plants or parts taken from each of 10 plants and any other observations should be made on all plants in the test.

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

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 For the assessment of uniformity, a population standard of 1% and an acceptance probability of at least 95% should be applied. In the case of a sample size of 50 plants, 2 off-types are allowed and for a sample size of 12 plants, 1 off-type is allowed.

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 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 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:

(a) Plant: growth habit (characteristic 1)
(b) Only varieties with leaf lobes present: Leaf: shape (characteristic 11)
(c) Leaf blade: main color (characteristics 17)
(d) Storage root: lateral outline (characteristic 37)
(e) Storage root: main color of skin (largest surface area) (characteristic 40)
(f) Storage root: main color of flesh (characteristic 42)

For ornamentals:

(a) Leaf blade: lobes (characteristic 10)
(b) Leaf blade: variegation (characteristic ?)
(c) Leaf blade: main color of upper side(characteristic ?)

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 6.1.2

QL: Qualitative characteristic – see Chapter 6.3
QN: Quantitative characteristic – see Chapter 6.3
PQ: Pseudo-qualitative characteristic – see Chapter 6.3

MG, MS, VG, VS: See Chapter 3.3.2

(a)-(h) See Explanations on the Table of Characteristics in Chapter 8.1
(+) See Explanations on the Table of Characteristics in Chapter 8.2

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

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
1. (*)	**VG**	**Plant: growth habit**					
QN	**(a)**	upright or erect				Sinchunmi	1
		semi-upright or semi-erect				Younmi	2 or 3
		spreading				Yulmi	3 or 5
2.	**MS**	**Stem: length of primary shoots**					
QN	**(a)**	short				Sinchunmi	3
	(b)	medium				Younmi, Koganesengan	5
		long				Zami	7
3.	**MS**	**Stem: internode length**					
QN	**(a)**	short				Younmi	3
	(b)	medium				Yulmi, Koganesengan	5
	(c)	long				Shinhwangmi	7
4.	**MS**	**Stem: internode diameter**	**"not applicable for ornamentals"**				
QN	**(a)**	very small				Zami	1
	(b)	small				Sinchunmi	3
	(c)	medium				Koganesengan, Yulmi	5
		large				Shinyulmi	7
		very large				Chinmi	9
5. new	**VG**	**Stem: main color of internode (anthocyanin coloration excluded)**					

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
6. (*)	**VG**	**Stem: intensity of anthocyanin coloration of internode**					
QN	**(a)**	absent or weak				Yulmi	1
	(b)	medium				Singeonmi	2
		strong				Hayanmi	3
7. (*)	**VG**	**Stem: intensity of anthocyanin coloration of tip**					
QN	**(a)**	absent or weak				Yulmi	1
	(b)	medium				Sinjami	2
		strong				Hayanmi	3
8. (*)	**VG**	**Stem: intensity of anthocyanin coloration of node**					
QN	**(a)**	absent or weak				Yulmi	1
	(b)	medium					2
		strong				Hayanmi	3
9. (*)	**VS**	**Stem: pubescence of tip**	"not applicable for ornamentals"				
QN	**(a)**	sparse				Yulmi	3
	(b)	medium				Koganesengan	5
		dense				Zami	7
10. new		**Leaf blade: lobes**					
	(a)	absent					1
	(d)	present					9

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
11. (*) (+)	**VG**	**Only varieties with leaf lobes absent: Leaf: shape**					
PQ	**(a)**	round					1
	(d)	reniform				Kohkei 14	2
		cordate				Yulmi	3
		triangular				Koganesengan	4
12. new		**Only varieties with leaf lobes present: Leaf: overall shape**					
13. new		**Only varieties with leaf lobes present: Leaf: shape of the base**					
14. (+)	**VG**	**Only varieties with leaf lobes present: Leaf: depth of lobbing**					
QN	**(a)**	very shallow					1
	(d)	shallow				Sinchunmi	3
		moderate					5
		deep					7
		very deep					9
15. (+)	**VG**	**Only varieties with leaf lobes present: Leaf: number of lobes**					
QN	**(a)**	three or few					1 or 3
	(d)	five or medium				Sinchunmi	2or 5
		seven or many					3 or 7
		nine					4

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
16. (*)	**VG**	**Leaf: anthocyanin coloration of upper side**	"not applicable for ornamentals"??→ check				
QN	**(a)**	absent or weak				Yulmi	1
	(d)	medium				Hayanmi	2
		strong					3
17. (*)	**VG**	**Leaf blade: main color**	"not applicable for ornamentals"				
PQ	**(a)**	yellow green				??	1
	(d)	green				Yulmi	2
		grey green				Hayanmi	3
18. (+)	**VG**	**Leaf blade: extent of anthocyanin on abaxial veins**	**"**not applicable for ornamentals"??→ check				
QN	**(a)**	very small				Yulmi	1
	(d)	small					3
		medium					5
		large				Hayanmi	7
		very large					9
19. new		**Leaf blade: intensity of anthocyanin coloration on abaxial veins**					
		absent or very weak					1
		weak					3
		medium					5
		strong					7
		very strong					9

	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
20. new	**Young leaf blade: variegation on upper side**	for ornamentals				
	absent					?
	present					?
21. new	**Young leaf blade: main color on upper side**	for ornamentals				
	RHS Colour Chart (indicate reference number)					
22. new	**Young leaf blade: secondary color on upper side**	for ornamentals				
	RHS Colour Chart (indicate reference number)					
23. new	**Young leaf blade: tertiary color on upper side**	for ornamentals				
	RHS Colour Chart (indicate reference number)					
24. new	**Mature leaf blade: variegation on upper side**	for ornamentals				
	absent					?
	present					?
25. new	**Mature leaf blade: main color on upper side**	for ornamentals				
	RHS Colour Chart (indicate reference number)					

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
26. new		**Mature leaf blade: secondary color on upper side** RHS Colour Chart (indicate reference numer)	for ornamentals				
27. new		**Mature leaf blade: tertiary color on upper side** RHS Colour Chart (indicate reference number)	for ornamentals				
28. new		**Mature leaf blade: main color on lower side** RHS Colour Chart (indicate reference number)	for ornamentals				
29. new		**Mature leaf blade: number of colors of lower side**	for ornamentals				
30. new		**Mature leaf blade: color of veins on lower side** RHS Colour Chart (indicate reference number)	for ornamentals				
31. (*)	**VG**	**Petiole: anthocyanin coloration**					
QN	**(a)**	absent or very weak				Yulmi	1
	(d)	weak					3
		medium				Hayanmi	5
		strong					7

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
32.	**VG**	**Petiole: position of anthocyanin coloration**					
PQ	**(a)**	only close to leaf blade					1
	(d)	scattered					2
		all over the petiole					3
33. **(+)**	**VG/ MS**	**Petiole: length**					
QN	**(a)**	very short				Sinchunmi	1
	(d)	short					3
		medium				Koganesengan, Yulmi	5
		long					7
		very long				Shinmi	9
34. **new**		**Flower: diameter**	for ornamentals				
35. **new**		**Flower: color**	for ornamentals				
36.	**MS**	**Storage root : ratio length/width**	"not applicable for ornamentals"				
QN	**(e)**	small					3
		medium				Geonmi	5
		large				Yulmi	7
37. **(*)** **(+)**	**VG**	**Storage root: lateral outline**	"not applicable for ornamentals"				
PQ	**(e)**	rounded				Geomi	1
		oblong					2
		irregular				Shinyulmi	3

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
38. **(+)**	**VG**	**Storage roots with lateral outline rounded only: storage root: position of broadest part**	"not applicable for ornamentals"				
QN	**(e)**	towards base					1
		in middle				Geonmi	2
		towards top					3
39. **(+)**	**MS/ VG**	**Storage root: cortex thickness**	"not applicable for ornamentals"				
QN	**(e)**	thin				Yulmi	3
		medium					5
		thick				Shingeonmi	7
40. **(*)** **(+)**	**VG**	**Storage root: main color of skin (largest surface area)**	"not applicable for ornamentals"				
PQ	**(e)**	white					1
		light beige				Chinmi, Koganesengan	2
		yellow					3
		orange					4
		brownish orange					5
		pink				Yulmi	6
		red				Shinhwangmi	7
		purple red					8
		light purple					9
		medium purple					10
		brown				Zami	11
41.	**VG**	**Storage root: secondary color of skin**					

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
42. (*) (+)	**VG**	**Storage root: main color of flesh**	"not applicable for ornamentals"				
PQ	**(e)**	white				Hayanmi, Shirosangan	1
		yellow				Yulmi, Benikomachi	2
		orange				Juhwangmi	3
		purple				Borami	4
43. (*) (+)	**VG**	**Storage root: intensity of main color of flesh**	"not applicabe for ornamentals"				
PQ	**(e)**	light				??	3
		medium				??	5
		dark				??	7
44. (+)		**Storage root: secondary color of flesh**	"not applicabe for ornamentals"				
	(e)	white					1
		light beige					2
		yellow					3
		orange				Toka Toka Gold	4
		pink					5
		red					6
		red-purple				Owairka Red	7
		purple					8
45. new		**Distribution of secondary color**	"not applicable for ornamentals"				
(+)							
	(e)						

8. Explanations on the Table of Characteristics

8.1 Explanations covering several characteristics

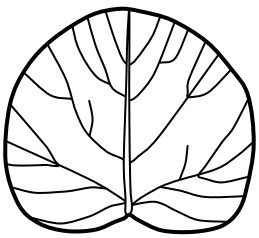
Characteristics containing the following key in the second column of the Table of Characteristics should be examined as indicated below:

(a) All the characteristics except storage roots should be made after 90 days from planting
(b) All characteristics of the stem should be observed on the main stem
(c) Stem internodes and diameter should be observed in an internode located in the middle third of the main stem
(d) Observation on leaves should be made at the middle part of the main stem
(e) Root storage characteristics which should be observed after harvest

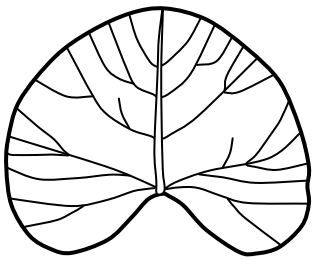
For ornamentals,
(f) All characteristics should be recorded on fully developed plants
(g) All leaf characteristic excluding young leaf characteristic should be observed on the middle third of the stem
(h) All observation on the young leaf should be made on expanding leaves towards the tip of the stem

8.2 Explanations for individual characteristics

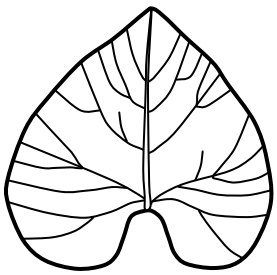
Ad. 11: Only varieties with leaf lobes present: Leaf: shape



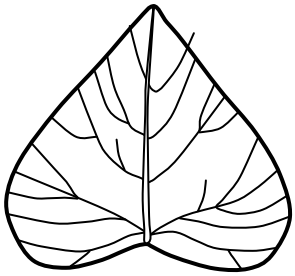
1
round



2
reniform

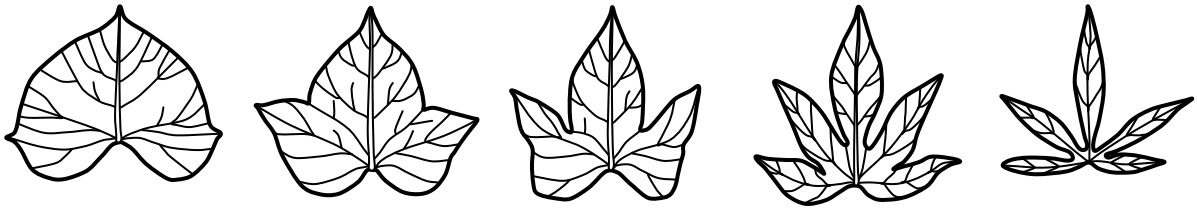


3
cordate



4
triangular

Ad. 14: Only varieties with leaf lobes present: Leaf: depth of lobbing



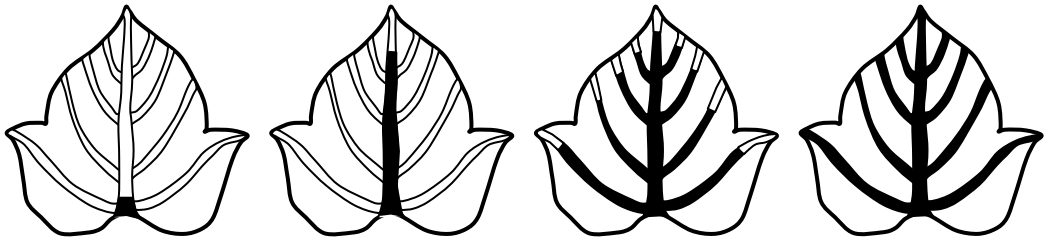
1 very shallow | 2 shallow | 3 moderate | 4 deep | 5 very deep

Ad. 15: Only varieties with leaf lobes present: Leaf: number of lobes

1 or 3 three or few | 2 or 5 five or medium | 3 or 7 seven or many | 4 nine

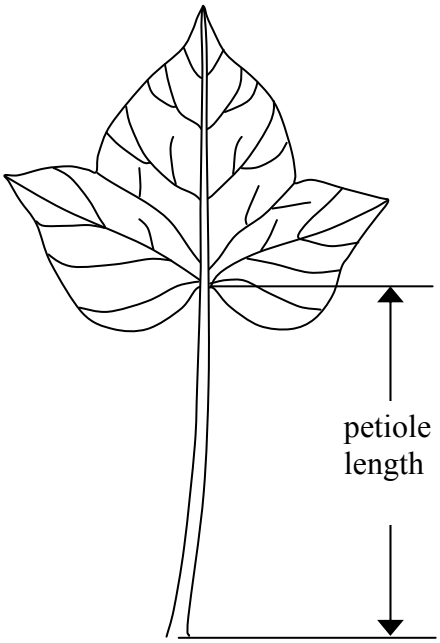
Ad. 18: Leaf: extent of anthocyanin in on abaxial veins

[TO BE PROVIDED]

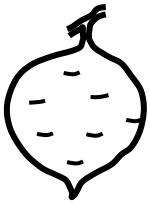


1 very small | 3 small | 5 medium | 7 large | 9 very large

Ad. 33: Petiole length



Ad. 37: Storage root: lateral outline

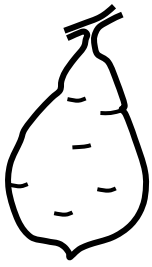


1
rounded

2
oblong

3
irregular

Ad. 38: Storage roots with lateral outline rounded only: Storage root: position of broadest part

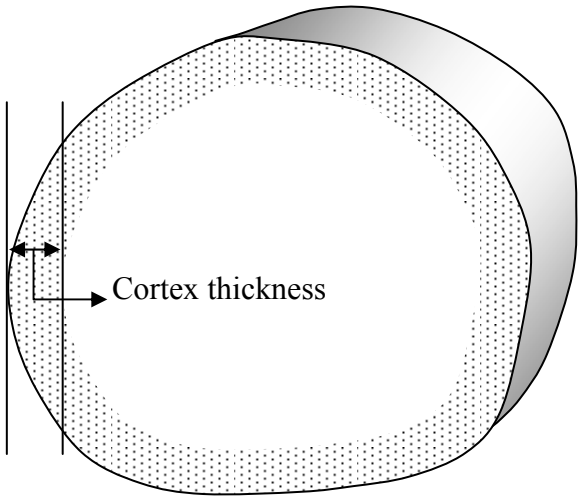


1
toward base

2
in middle

3
toward top

Ad. 39: Storage root: cortex thickness



Ad. 40: Storage root: main color of skin (largest surface area)

[TO BE PROVIDED]

Ad. 42: Storage root: main color of flesh

[TO BE PROVIDED]

Ad. 44: Storage root: secondary color of flesh

[TO BE PROVIDED]

Ad. 45: Distribution of secondary color

[TO BE PROVIDED]

9. Literature

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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

1. Subject of the Technical Questionnaire

1.1 Botanical name	*Ipomoea batatas* (L.) Lam.
1.2 Common name	Sweet potato

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

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)

4.2 Method of propagating the variety

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)

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

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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 note which best corresponds).

	Characteristics	Example Varieties	Note
5.1 (1)	**Plant: growth habit**		
	upright or erect	Sinchunmi	1[ ]
	semi-upright or semi-erect	Younmi	2 or 3[ ]
	spreading	Yulmi	3 or 5[ ]
5.2 (6)	**Stem: intensity of anthocyanin coloration of internode**		
	absent or weak	Yulmi	1[ ]
	medium	Singeonmi	2[ ]
	strong	Hayami	3[ ]
5.3 (7)	**Stem: intensity of anthocyanin coloration of tip**		
	absent or weak	Yulmi	1[ ]
	medium	Sinjami	2[ ]
	strong	Hayami	3[ ]
5.4 (8)	**Stem: intensity of anthocyanin coloration of node**		
	absent or weak	Yulmi	1[ ]
	medium		2[ ]
	strong	Hayanmi	3[ ]
5.5 (9)	**Stem: pubescence of tip**		
	sparse	Yulmi	3[ ]
	medium	Koganesengen	5[ ]
	dense	Zami	7[ ]

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	Characteristics	Example Varieties	Note
5.6 (11)	**<u>Only varieties with leaf lobes absent</u>: Leaf: shape**		
	round		1[ ]
	reniform	Kohkei 14	2[ ]
	cordate	Yulmi	3[ ]
	triangular	Koganesengen	4[ ]
5.7 (31)	**Petiole: anthocyanin coloration**		
	absent or very weak	Yulmi	1[ ]
	weak		3[ ]
	medium	Hayanmi	5[ ]
	strong		7[ ]
5.8 (37)	**Storage root: lateral outline**		
	rounded	Geomi	1[ ]
	oblong		2[ ]
	irregular	Shinyulmi	3[ ]

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	Characteristics	Example Varieties	Note
5.9 (40)	**Storage root: main color of skin (largest surface area)**		
	white		1[ ]
	light beige	Chimi, Koganesengan	2[ ]
	yellow		3[ ]
	orange		4[ ]
	brownish orange		5[ ]
	pink	Yulmi	6[ ]
	red	Shinwangmi	7[ ]
	purple red		8[ ]
	light purple		9[ ]
	medium purple		10[ ]
	brown	Zami	11[ ]
5.10 (42)	**Storage root: main color of flesh**		
	white	Hayanmi, Shirosangan	1[ ]
	yellow	Yulmi, Benikomachi	2[ ]
	orange	Juhwangmi	3[ ]
	purple	Borami	4[ ]

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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	*[e.g. Plant: growth habit]*	*[e.g. upright]*	*[e.g. semi-upright]*

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

7.3.1 What's the varietal usage?

Non-ornamental [ ] Ornamental [ ]

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.

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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”.

……

10. 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]