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UPOV

INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

GENEVA

YAM *

UPOV Code:
DIOSC_ALA; DIOSC_BAT; DIOSC_JAP

Dioscorea alata L.; *Dioscorea polystachya* Turcz.; *Dioscorea japonica* Thunb.

GUIDELINES FOR THE CONDUCT OF TESTS FOR DISTINCTNESS, UNIFORMITY AND STABILITY

Alternative Names:*

Botanical name	*English*	*French*	*German*	*Spanish*
Dioscorea alata L.	Greater yam, Guyana arrowroot, Ten-months yam, Water yam, White yam, Winged yam, Yam	Grande igname, Igname ailée, Igname de Chine	Geflügelter Yam, Wasser-Yamswurzel	Ñame blanco, Ñame de agua, Tabena
Dioscorea polystachya Turcz., *Dioscorea batatas* Decne.	Chinese yam, Chinese-potato, Cinnamon-vine	Igname	Chinesische Yamswurzel	
Dioscorea japonica Thunb.	Japanese yam	Igname japonaise		

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 *Dioscorea alata* L., *Dioscorea polystachya* Turcz. and *Dioscorea japonica* Thunb..

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 tubers.

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

30 tubers.

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 two independent growing cycles.

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 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 20 plants, which should be divided between 2 or more replicates.

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 should be made on 20 plants or parts taken from each of 20 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 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 20 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) Tuber: length (characteristic 15)
(b) Tuber: shape in cross section (characteristic 17)
(c) Tuber: shape in longitudinal section (characteristic 18)
(d) Tuber: color of flesh (characteristic 21)

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)-(b) 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: density of foliage**	**Plante : densité du feuillage**	**Pflanze: Dichte des Laubes**	**Planta: densidad del follaje**		
QN	**(a)**	sparse	faible	locker	escasa	Ise-imo	3
		medium	moyenne	mittel	media	Morimoto-imo	5
		dense	dense	dicht	densa	Gankumijika-taisho	7
2.	**VG**	**Plant: number of branches**	**Plante : nombre de ramifications**	**Pflanze: Anzahl Triebe**	**Planta: número de ramas**		
QN	**(a)**	few	petit	gering	bajo	Ise-imo	3
		medium	moyen	mittel	medio	Fusaougi	5
		many	grand	groß	alto	Segoshi-2	7
3.	**VG**	**Stem: thickness**	**Tige : épaisseur**	**Stengel: Dicke**	**Tallo: grosor**		
(+)							
QN	**(a)**	thin	mince	dünn	delgado	Inabu-2	3
		medium	moyenne	mittel	medio	Jinecho	5
		thick	épaisse	dick	grueso	Shintanmaru	7
4.	**VG**	**Stem: anthocyanin coloration**	**Tige : pigmentation anthocyanique**	**Stengel: Anthocyanfärbung**	**Tallo: coloración antociánica**		
QN	**(a)**	absent or very weak	nulle ou très faible	fehlend oder sehr gering	ausente o muy débil	Kusakarigou	1
		weak	faible	gering	débil		3
		medium	moyenne	mittel	media	Shintanmaru	5
		strong	forte	stark	fuerte	Inabu-2	7
5.	**VG/ MS**	**Stem: aerial tubers**	**Tige : tubercules aériens**	**Stengel: Luftknollen**	**Tallo: tubérculos aéreos**		
QN	**(b)**	absent or very few	absents ou très peu nombreux	fehlend oder sehr wenige	ninguno o muy pocos	Tukuneimo	1
		few	peu nombreux	wenige	pocos	Shintanmaru	3
		medium	moyens	mittel	medio	Fusaougi	5
		many	nombreux	viele	muchos	Jinecho	7

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
6.	**VG**	**Aerial tuber: size**	**Tubercule aérien : taille**	**Luftknolle: Größe**	**Tubérculo aéreo: tamaño**		
QN	**(b)**	small	petite	klein	pequeño	Fusaougi	3
		medium	moyenne	mittel	medio	Nebarisuta	5
		large	grande	groß	grande	Morimoto-imo	7
7.	**VG**	**Aerial tuber: intensity of brown color of skin**	**Tubercule aérien : intensité de la couleur brune de la peau**	**Luftknolle: Intensität der Braunfärbung der Schale**	**Tubérculo aéreo: intensidad del color marrón de la epidermis**		
QN	**(b)**	light	claire	hell	claro	Shintanmaru	3
		medium	moyenne	mittel	medio	Jinecho	5
		dark	foncée	dunkel	oscuro	Nebarisuta	7
8. **(+)**	**VG/ MS**	**Leaf blade: length**	**Limbe : longueur**	**Blattspreite: Länge**	**Limbo: longitud**		
QN	**(a)**	short	court	kurz	corto	Shintanmaru	3
		medium	moyen	mittel	medio	Fusaougi	5
		long	long	lang	largo	Osato-1	7
9. **(+)**	**VG/ MS**	**Leaf blade: width**	**Limbe : largeur**	**Blattspreite: Breite**	**Limbo: anchura**		
QN	**(a)**	narrow	étroit	schmal	estrecho	Inabu-2	3
		medium	moyen	mittel	medio	Jinecho	5
		broad	large	breit	ancho	Nebarisuta	7
10. **(*)** **(+)**	**VG/ MS**	**Leaf blade: ratio length/width**	**Limbe : rapport longueur/largeur**	**Blattspreite: Verhältnis Länge/Breite**	**Limbo: relación longitud/anchura**		
QN	**(a)**	elongated	allongé	verlängert	allargada	Jinecho	1
		medium	moyen	mittel	media	Nebarisuta	2
		compressed	comprimé	komprimiert	comprimida	Fusaougi	3

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
11.	**VG**	**Leaf blade: color**	**Limbe : couleur**	**Blattspreite: Farbe**	**Limbo: color**		
PQ	**(a)**	yellow green	vert jaune	gelbgrün	verde amarillo	Ougiimo	1
		light green	vert clair	hellgrün	verde claro	Toyama-senju	2
		medium green	vert moyen	mittelgrün	verde medio	Fusaougi	3
		dark green	vert foncé	dunkelgrün	verde oscuro	Inabu-2	4
12. **(+)**	**VG**	**Leaf blade: depth of sinus**	**Limbe : profondeur du sinus**	**Blattspreite: Tiefe der Einbuchtung**	**Limbo: profundidad de los senos**		
QN	**(a)**	shallow	peu profond	flach	poco profundos	Inabu-2	3
		medium	moyen	mittel	profundidad media	Fusaougi	5
		deep	profond	tief	profundos	Nebarisuta	7
13. **(+)**	**VG**	**Leaf blade: concavity of margin**	**Limbe : concavité du bord**	**Blattspreite: Höhlung des Randes**	**Limbo: concavidad en el margen**		
QN	**(a)**	absent or very weak	nulle ou très faible	fehlend oder sehr gering	ausente o muy débil	Shinjtanmaru	1
		weak	faible	gering	débil	Husaougi	3
		medium	moyenne	mittel	media	Tsukuneimo	5
		strong	forte	stark	fuerte	Nebarisuta	7
14.	**VG/ MS**	**Petiole: length**	**Pétiole : longueur**	**Blattstiel: Länge**	**Pecíolo: longitud**		
QN	**(a)**	short	court	kurz	corto	Jinecho	3
		medium	moyen	mittel	medio	Fusaougi	5
		long	long	lang	largo	Nebarikko	7
15. **(*)**	**VG/ MS**	**Tuber: length**	**Tubercule : longueur**	**Knolle: Länge**	**Tubérculo: longitud**		
QN	**(b)**	short	courte	kurz	corto	Shintanmaru	3
		medium	moyenne	mittel	medio	Nebarisuta	5
		long	longue	lang	largo	Jinecho	7

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
16. (*)	**VG/ MS**	**Tuber: width**	**Tubercule : largeur**	**Knolle: Breite**	**Tubérculo: anchura**		
QN	**(b)**	narrow	étroite	schmal	estrecho	Inabu-2	3
		medium	moyenne	mittel	medio	Shintanmaru	5
		broad	large	breit	ancho	Fusaougi	7
17. (*) (+)	**VG**	**Tuber: shape in cross section**	**Tubercule : forme en section transversale**	**Knolle: Form im Querschnitt**	**Tubérculo: forma en sección transversal**		
PQ	**(b)**	circular	arrondie	kreisförmig	circular	Gankumijika-taisho	1
		elliptic	elliptique	elliptisch	elíptico	Inabu-2	2
		irregular	irrégulière	unregelmäßig	irregular	Ise-imo	3
18. (*) (+)	**VG**	**Tuber: shape in longitudinal section**	**Tubercule : forme en section longitudinale**	**Knolle: Form im Längsschnitt**	**Tubérculo: forma en sección longitudinal**		
PQ	**(b)**	linear	linéaire	linear	linear	Inabu-2	1
		very narrow oblong	rectangulaire très étroite	sehr schmal rechteckig	muy estrecho oblongo	Jinecho	2
		narrow oblong	rectangulaire étroite	schmal rechteckig	estrecho oblongo	Trophy 1066	3
		very narrow elliptic	elliptique très étroite	sehr schmal elliptisch	muy estrecho elíptico	Gankumijika-taisho	4
		circular	arrondie	kreisförmig	circular	Shin-tanmaru	5
		narrow obtriangular	obtriangulaire étroite	schmal verkehrt dreieckig	obtriangular estrecho	Tokkuriimo	6
		broad obtriangular	obtriangulaire large	breit verkehrt dreieckig	obtriangular ancho	Fusaougi	7
		hand-shaped	en forme de main	handförmig	en forma de mano	Bussho-imo	8
		irregular	irrégulière	unregelmäßig	irregular	Ise-imo	9

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
19.	**VG**	**Tuber: color of skin**	**Tubercule : couleur de la peau**	**Knolle: Farbe der Schale**	**Tubérculo: color de la epidermis**		
PQ	**(b)**	yellow brown	brun jaune	gelbbraun	marrón amarillo	Ise-imo	1
		light brown	brun clair	hellbraun	marrón claro	Fusaougi	2
		medium brown	brun moyen	mittelbraun	marrón medio	Gankumijikataishou	3
		dark brown	brun foncé	dunkelbraun	marrón oscuro		4
		red	rouge	rot	rojo		5
		purple	violette	purpurn	púrpura	Murasaki-imo	6
		black	noire	schwarz	negro	Yamato-kurokawa	7
20. **(+)**	**VG**	**Tuber: length of neck**	**Tubercule : longueur du col**	**Knolle: Länge des Halses**	**Tubérculo: longitud del cuello**		
QN	**(b)**	short	court	kurz	corto	Shintanmaru	3
		medium	moyen	mittel	medio	Jinecho	5
		long	long	lang	largo	Inabu-2	7
21. **(*)**	**VG**	**Tuber: color of flesh**	**Tubercule : couleur de la chair**	**Knolle: Farbe des Fleisches**	**Tubérculo: color de la carne**		
PQ	**(b)**	white	blanche	weiß	blanco	Naga-imo	1
		cream	crème	cremefarben	crema	Ise-imo	2
		orange	orange	orange	anaranjado		3
		purple red	rouge pourpre	purpurrot	rojo púrpura	Murasaki-imo	4
22. **(+)**	**VG/ MS**	**Tuber: firmness of flesh**	**Tubercule : fermeté de la chair**	**Knolle: Festigkeit des Fleisches**	**Tubérculo: firmeza de la carne**		
QN	**(b)**	soft	molle	weich	blanda	Gankumijikataisho	1
		medium	moyenne	mittel	media	Fusaougi	2
		firm	ferme	fest	firme	Tukuneimo	3

		English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
23. **(+)**	**VG**	**Tuber: viscosity of flesh after grating**	**Tubercule : viscosité de la chair après grattage**	**Knolle: Viskosität des Fleisches nach dem Reiben**	**Tubérculo: viscosidad de la carne al rallarla**		
QN	**(b)**	low	faible	gering	baja	Gankumijikataisho	1
		medium	moyenne	mittel	media	Fusaougi	2
		high	grande	hoch	alta	Tukuneimo	3
24. **(+)**	**VG**	**Only varieties with white or cream flesh color: Tuber: browning of flesh after grating**	**Variétés à chair blanche ou crème seulement : Tubercule : brunissement de la chair après grattage**	**Nur Sorten mit weißem oder cremefarbenem Fleisch: Knolle: Bräunung des Fleisches nach dem Reiben**	**Únicamente variedades con la carne de color blanco o crema: Tubérculo: oscurecimiento de la carne al rallarla**		
QN	**(b)**	weak	faible	gering	débil	Shintanmaru	1
		medium	moyen	mittel	medio		2
		strong	fort	stark	fuerte	Shuhou-1	3
25. **(+)**	**MG**	**Time of maturity**	**Époque de maturité**	**Zeitpunkt der Reife**	**Época de maduración**		
QN		early	précoce	früh	temprana	Ozutuwase	3
		medium	moyenne	mittel	media	Naga-imo	5
		late	tardive	spät	tardía	Inabu-2	7

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) Plant, stem, leaf blade, petiole: all observations should be made when the plant is fully developed in late summer.

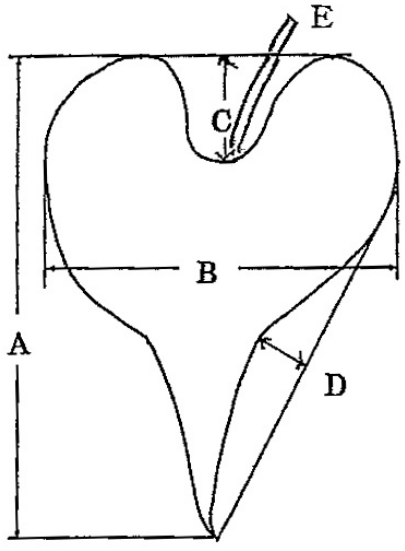
(b) Aerial tuber, tuber: all observations should be made when the tuber is fully developed and all leaves have senesced.

8.2 Explanations for individual characteristics

Ad. 3: Stem: thickness

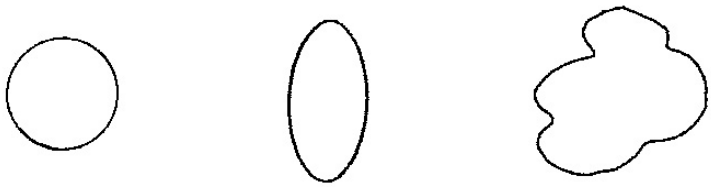
The thickness of the stem should be observed on the main stem around 30 cm above ground level.

Ad. 8: Leaf blade: length
Ad. 9: Leaf blade: width
Ad. 10: Leaf blade: ratio length/width
Ad. 12: Leaf blade: depth of sinus
Ad. 13: Leaf blade: concavity of margin



A: length
B: width
C: depth of sinus
D: concavity of margin
E: petiole

Ad. 17: Tuber: shape in cross section

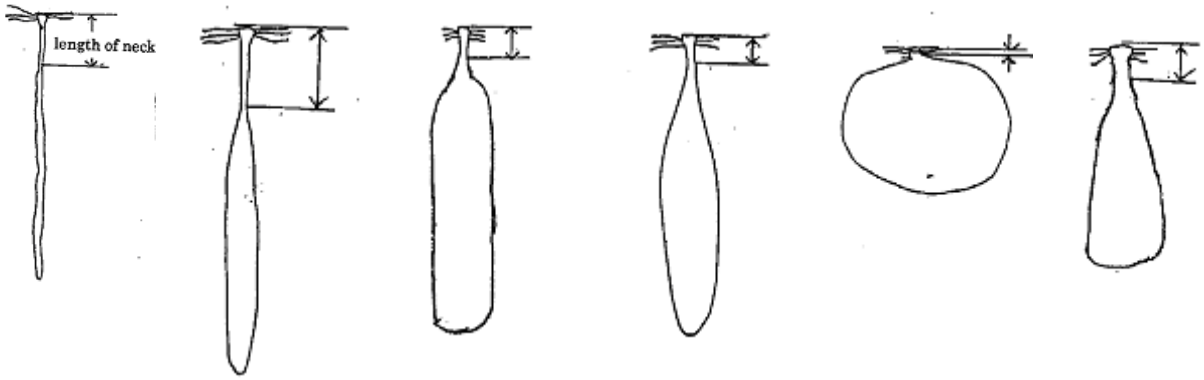


1
circular

2
elliptic

3
irregular

Ad. 18: Tuber: shape in longitudinal section
Ad. 20: Tuber: length of neck



1
linear

2
very narrow oblong

3
narrow oblong

4
very narrow elliptic

5
circular

6
narrow obtriangular

7
broad obtriangular

8
hand-shaped

Ad. 22: Tuber: firmness of flesh

The firmness of flesh should be observed with a hardness meter or by hand in comparison with the example varieties.

Ad. 23: Tuber: viscosity of flesh after grating

Viscosity of flesh is observed as follows:

1. Peel the tuber
2. Grate the middle part of tuber with kitchen grater
3. Feel the grated flesh with one’s fingers, and estimate the viscosity

Ad. 24: Only varieties with white or cream flesh color: Tuber: browning of flesh after grating

Browning of flesh is observed as follows:

1. Peel the tuber
2. Grate the middle part of tuber with kitchen grater
3. Observe for browning of flesh 1 hour later

Ad. 25: Time of maturity

The time of maturity is when the tuber is fully developed and all leaves have senesced.

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

1.1.1 Botanical name	*Dioscorea alata* L.	[ ]
1.1.2 Common name	Greater yam, Guyana arrowroot, Ten-months yam, Water yam, White yam, Winged yam, Yam	
1.2.1 Botanical name	*Dioscorea polystachya* Turcz.	[ ]
1.2.2 Common name	Chinese yam, Chinese-potato, Cinnamon-vine	
1.3.1 Botanical name	*Dioscorea japonica* Thunb.	[ ]
1.3.2 Common name	Japanese yam	

2. Applicant

Name	
Address	
Telephone No.	
Fax No.	
E-mail address	

Breeder (if different from applicant)

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:

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) dividing [ ]

(b) aerial tubers [ ]

(c) *in vitro* propagation [ ]

(d) other (state method) [ ]

4.2.2 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 (15)	**Tuber: length**		
	short	Shintanmaru	3[ ]
	medium	Nebarisuta	5[ ]
	long	Jinecho	7[ ]
5.2 (17)	**Tuber: shape in cross section**		
	circular	Gankumijika-taisho	1[ ]
	elliptic	Inabu-2	2[ ]
	irregular	Ise-imo	3[ ]
5.3 (18)	**Tuber: shape in longitudinal section**		
	linear	Inabu-2	1[ ]
	very narrow oblong	Jinecho	2[ ]
	narrow oblong	Trophy 1066	3[ ]
	very narrow elliptic	Gankumijika-taisho	4[ ]
	circular	Shin-tanmaru	5[ ]
	narrow obtriangular	Tokkuriimo	6[ ]
	broad obtriangular	Fusaougi	7[ ]
	hand-shaped	Bussho-imo	8[ ]
	irregular	Ise-imo	9[ ]
5.5 (21)	**Tuber: color of flesh**		
	white	Naga-imo	1[ ]
	cream	Ise-imo	2[ ]
	orange		3[ ]
	purple red	Murasaki-imo	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	*Tuber: shape in cross section*	*circular*	*elliptic*

Comments:

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[#]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

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”.

……

9.3 Has the plant material to be examined been tested for the presence of virus or other pathogens?

Yes [ ]

(please provide details as specified by the Authority)

No [ ]

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]