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INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS
GENEVA

DRAFT

PECAN NUT

UPOV Code: CARYA_ILL

Carya illinoensis (Wangenh) K.Koch

GUIDELINES

FOR THE CONDUCT OF TESTS

FOR DISTINCTNESS, UNIFORMITY AND STABILITY

prepared by an expert from Argentina

*to be considered by the Technical Working Party for Fruit Crops at its thirty-sixth session,
to be held in Kôfu, Japan from September 5 to 9, 2005*

Alternative Names:*

<i>Botanical name</i>	<i>English</i>	<i>French</i>	<i>German</i>	<i>Spanish</i>
<i>Carya illinoensis</i> (Wangenh.) K. Koch	Pecan nut	Pacancier	Pekan, Pekannuß	Nuez pecán, Pecán, Nogal Pacanero

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 *Carya illinoensis* (Wangenh.) K. Koch.

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 dormant graftwood (15 cm long, 1-1.5 cm diameter and with 3 groups of buds) to be sent at grafting time.

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

10 dormant graftwoods.

The rootstock to be used is specified by the competent authorities.

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 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*

The tests should be carried out under conditions ensuring satisfactory growth for the expression of the relevant characteristics of the variety and for the conduct of the examination. In particular, it is essential that the trees produce a satisfactory crop of fruit in each of the two growing cycles.

3.4 *Test Design*

3.4.1 Each test should be designed to result in a total of, at least, 5 trees.

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 5 plants or parts taken from each of 5 plants. In the case of parts of plants, the number to be taken from each of the plants should be 2.

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 5 plants, no off-types are 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) Stigma: color (characteristic 17)
- (b) Nut: length (characteristic 21)
- (c) Nut: width in ventral view (characteristic 22)
- (d) Nut: width in lateral view (characteristic 23)
- (e) Time of receptivity of stigma compared to pollen shed (characteristic 44)

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

(+) See Explanations on the Table of Characteristics in Chapter 8.

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

	English	Français	Deutsch	Español	Example Varieties/ Exemples/ Beispielsorten/ Variedades ejemplo	Note/ Nota
1.	Tree: vigor	Arbre: vigueur	Baum: Wuchsstärke	Árbol: vigor		
(+)						
QN	weak	faible	gering	débil		3
	medium	moyenne	mittel	medio		5
	strong	forte	stark	fuerte		7
2.	Tree: density of crown	Arbre: densité de la couronne	Baum: Kronendichte	Árbol: densidad de la copa		
QN	sparse	faible	locker	laxa		3
	medium	moyenne	mittel	media		5
	dense	dense	dicht	densa		7
3.	Tree: attitude of branches			Árbol: actitud de las ramas		
(+)						
PQ	erect	dressé	aufrecht	erecto		1
	semi erect	demi dressé	halbaufrecht	semi erecto		2
	spreading			extendido		3
4.	One year old shoot: color			Rama de un año: color		
PQ	greenish brown			castaño verdoso		1
	brown			castaño		2
	reddish brown			castaño rojizo		3
5.	One year old shoot: intensity of color			Rama de un año: intensidad del color		
QN	light			claro		3
	medium			medio		5
	dark			oscuro		7

	English	Français	Deutsch	Español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
6.	Leaf: intensity of green color			Hoja: intensidad del color verde		
QN	light			claro		3
	medium			medio		5
	dark			oscuro		7
7.	Leaf: length of terminal leaflet			Hoja: longitud del folíolo terminal		
QN	short			corta		3
	medium			media		5
	long			larga		7
8.	Leaf: width of terminal leaflet			Hoja: ancho del folíolo terminal		
QN	narrow			angosto		3
	medium			medio		5
	broad			ancho		7
9. (+)	Leaf: ratio length/width of terminal leaflet			Hoja: relación largo/ancho del folíolo terminal		
QN	small	faible	klein	pequeña		3
	medium	moyen	mittel	media		5
	large	élevé	groß	grande		7
10. (+)	Leaf: length of petiole			Hoja: largo del pecíolo		
QN	short			corto		3
	medium			medio		5
	long			largo		7
11. (+)	Leaf: presence of petiole of lateral leaflet			Hoja: presencia de pecíolo del folíolo lateral		
QL	absent			ausente		1
	present			presente		9

	English	Français	Deutsch	Español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
12.	Leaf: asymmetry of lateral leaflet			Hoja: asimetría del folíolo lateral		
(+)						
QN	absent or very weak			ausente o muy débil		1
	weak			débil		3
	medium			media		5
	strong			fuerte		7
13.	<u>Only varieties with asymmetric leaflets:</u> position of longer side of leaflets			<u>Sólo variedades con folíolos asimétricos:</u> posición del lado más largo de los folíolo s		
(+)						
QL	towards apex			hacia el eje		1
	towards base			hacia la base		2
14.	Leaf: curvature of longitudinal axis of lateral leaflet			Hoja: curvatura del eje longitudinal del folíolo lateral		
(+)						
QN	weak			débil		3
	medium			media		5
	strong			fuerte		7
15.	Female inflorescence: predominant number of flowers			Inflorescencia femenina: número predominante de flores		
PQ	three			tres		1
	four			cuatro		2
	five			cinco		3
	six			seis		4
	seven			siete		5
16.	Stigma: type			Estigma: tipo		
(+)						
QL	entire			entero		1
	bifurcate			bífido		2

	English	Français	Deutsch	Español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
17.	Stigma: color			Estigma: color		
(*)						
QL	greenish			verdoso		1
	reddish			rojizo		2
18.	Catkin: length			Amento: largo		
QN	short			corto		3
	medium			medio		5
	long			largo		7
19.	Husk: intensity of green color			Vaina: intensidad del color verde		
(+)						
QN	light			claro		3
	medium			medio		5
	dark			oscuro		7
20.	Husk: presence of ribs			Vaina: presencia de costillas		
(+)						
QN	absent or very weak			ausente o muy débil		1
	weak			débil		3
	medium			medio		5
	strong			fuerte		7
21.	Nut: length			Nuez: largo		
(*)						
(+)						
QN	short			corto	Desirable, Success	3
	medium			medio	Harris Super	5
	long			largo	Mahan	7

	English	Français	Deutsch	Español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
22. (*) (+)	Nut: width in ventral view			Nuez: ancho en vista ventral		
QN	narrow			angosto	Mahan	3
	medium			medio	Stuart	5
	broad			ancho	Shoshoni	7
23. (*) (+)	Nut: width in lateral view			Nuez: ancho en vista lateral		
QN	narrow			angosto	Kernoodle, Mahan	3
	medium			medio	Stuart	5
	broad			ancho	Shoshoni	7
24. (+)	Nut: shape in ventral view			Nuez: forma en vista ventral		
PQ	orbicular			orbicular		1
	ovate			ovado		2
	oval elliptic			oval elíptico	Shoshoni, Success	3
	obovate			obovado		4
	elliptic			elíptico		5
	oblong elliptic			oblongo elíptico	Kernoodle, Starking, Stuart	6
	oblong			oblongo	Harris Super, Mahan	7

	English	Français	Deutsch	Español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
25.	Nut: shape in lateral view			Nuez: forma en vista lateral		
(+)						
PQ	orbicular			orbicular		1
	ovate			ovado		2
	oval elliptic			oval elíptico	Success	3
	obovate			obovado		4
	elliptic			elíptico	Shoshoni	5
	oblong elliptic			Oblongo elíptico	Desirable, Kernoodle, Stuart	6
	oblong			oblongo	Harris Super, Mahan	7
26.	Nut: shape in cross section			Nuez: forma en sección transversal		
(+)						
PQ	elliptic			elíptico	Kernoodle	1
	circular			circular	Desirable, Shoshoni	2
	oblate			comprimido/aplanado	Mahan	3
27.	Nut: shape of apex			Nuez: forma del ápice		
(+)						
PQ	rounded			redondeado		1
	obtuse			obtuso	Success	2
	acute			agudo	Desirable, Stuart	3
	acuminate			acuminado	Desirable, Harris Super	4
	apiculate			apiculado	Kernoodle	5
28.	Nut: shape of base			Nuez: forma de la base		
(+)						
PQ	rounded			redondeada	Shoshoni, Success, Stuart	1
	acuminate			acuminada	Starking	2
	apiculate			apiculada	Mahan	3
	caudate			caudada		4

	English	Français	Deutsch	Español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
29.	Nut: intensity of brown color of shell			Nuez: intensidad del color castaño de la cáscara		
QN	light			claro	Desirable, Mahan, Success	
	medium			medio	Harris Super, Stuart	5
	dark			oscuro	Kernoodle, Shoshoni	7
30.	Nut: area of spotting			Nuez: área cubierta con manchas		
QN	small			pequeña	Harris Super, Shoshoni	3
	medium			media	Desirable, Kernoodle, Mahan	5
	large			grande	Stuart	7
31.	Nut: thickness of shell			Nuez: grosor de la cáscara		
(+)						
QN	thin			delgado		1
	medium			medio		2
	thick			grueso		3
32.	Nut: thickness of central partition wall			Nuez: grosor del tabique central		
QN	thin			delgado		1
	medium			medio		2
	thick			grueso		3

	English	Français	Deutsch	Español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
33.	Nut: ratio weight of nut/weight of kernel			Nuez: relación peso de la nuez/peso de la semilla		
QN	small			pequeña		3
	medium			media		5
	large			grande		7
34.	Kernel: size			Semilla: tamaño		
QN	small			pequeño		3
	medium			medio		5
	large			grande		7
35.	Kernel: intensity of brown ground color			Semilla: intensidad del color castaño de fondo		
QN	light			claro		3
	medium			medio		5
	dark			oscuro		7
36.	Kernel: adherence to shell			Semilla: adherencia a la cáscara		
(+)						
QN	weak			débil		3
	medium			media		5
	strong			fuerte		7
37.	Time of leaf bud burst			Época de brotación		
QN	early			temprana		3
	medium			media		5
	late			tardía		7

	English	Français	Deutsch	Español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
38.	Time of leaf fall			Época de defoliación		
(+)						
QN	early			temprana		3
	medium			media		5
	late			tardía		7
39.	Tree: persistence of rachis	Arbre: persistance du rachis		Árbol: persistencia del raquis		
(+)						
QL	absent	absent		ausente		1
	present	présent		presente		9
40.	Time of receptivity of stigma			Época de receptividad del estigma		
(+)						
QN	early			temprana	Shoshoni	3
	medium			media	Desirable, Mahan	5
	late			tardía	Caddo, Oklahoma	7
41.	Duration of receptivity of stigma			Duración de la receptividad del estigma		
QN	short			corta		3
	medium			media		5
	long			larga		7
42.	Time of anther dehiscence			Época de dehiscencia de las anteras		
QN	early			temprana		3
	medium			media		5
	late			tardía		7

	English	Français	Deutsch	Español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
43.	Duration of pollen shed			Duración de la liberación del polen		
QN	short			corta		3
	medium			media		5
	long			larga		7
44. (*)	Time of receptivity of stigma compared to pollen shed			Época de floración femenina comparada con la floración masculina		
QL	before (protogyny)			anterior (protoginia)	Kernoodle, Mahan, Mahan Stuart, Shoshoni	1
	simultaneous			simultánea	Cheyenne, Harris Super, Starking	2
	after (protandry)			posterior (protandria)	Caddo, Oconee, Oklahoma	3
45. (+)	Time of maturity for harvest			Época de madurez para cosecha		
QN	early			temprana		3
	medium			media		5
	late			tardía		7
46. (+)	Tree: persistence of husk after nut fall	Arbre: persistance du brou après la chute de la noix		Árbol: persistencia de la vaina luego de la caída de la nuez		
QL	not persistent	non persistant	nicht anhaftend	no persistente		1
	partially persistent	partiellement persistant	teilweise anhaftend	parcialmente persistente		2
	fully persistent	totalement persistant	vollständig anhaftend	completamente persistente		3

8. Explanations on the Table of Characteristics

Ad. 1: Tree: vigor

Ad. 3: Tree: attitude of branches

Ad. 9: Leaf: ratio length/width of terminal leaflet

Ad. 10: Leaf: length of petiole

Ad. 11: Leaf: presence of petiole of lateral leaflet

Ad. 12: Leaf: asymmetry of lateral leaflet

Ad. 13: Only varieties with asymmetric leaflets: position of longer side of leaflets

Ad. 14: Leaf: curvature of longitudinal axis of lateral leaflet

Ad. 16: Stigma: Type

Ad. 19: Husk: intensity of green color

Ad. 20: Husk: presence of ribs

Ad. 21: Nut: length

Ad. 22: Nut: width in ventral view

Ad. 23: Nut: width in lateral view

Ad. 24: Nut: shape in ventral view

Ad. 25: Nut: shape in lateral view

Ad. 26: Nut: shape in cross section

Ad. 27: Nut: shape of apex

Ad. 28: Nut: shape of base

Ad. 31: Nut: thickness of shell

Ad. 36: Kernel: adherence to shell

Ad. 38: Time of leaf fall

Ad. 39: Tree: persistence of rachis

Ad. 40: Time of receptivity of stigma

Ad. 45: Time of maturity for fruit harvest

Ad. 46: Tree: persistence of husk after nut fall

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	<input type="text" value="Carya illinoensis (Wangenh.) K Koch"/>	
1.2 Common name	<input type="text" value="PECAN NUT"/>	
2. Applicant		
Name	<input type="text"/>	
Address	<input type="text"/>	
Telephone No.	<input type="text"/>	
Fax No.	<input type="text"/>	
E-mail address	<input type="text"/>	
Breeder (if different from applicant)	<input type="text"/>	
3. Proposed denomination and breeder's reference		
Proposed denomination (if available)	<input type="text"/>	
Breeder's reference	<input type="text"/>	

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
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#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 Other []
(please provide details)

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

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
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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 Stigma: color (17)		
greenish		1[]
reddish		2[]
5.2. Nut: length (21)		
short	Desirable, Success	3[]
medium	Harris Super	5[]
long	Mahan	7[]
5.3 Nut: width in ventral view (22)		
narrow	Mahan	3[]
medium	Stuart	5[]
broad	Shoshoni	7[]
5.3 Nut: width in lateral view (23)		
narrow	Kernoodle, Mahan	3[]
medium	Stuart	5[]
broad	Shoshoni	7[]
5.4 Time of receptivity of stigma compared to pollen shed (44)		
before (protogyny)	Kernoodle, Mahan, Mahan Stuart, Shoshoni	1[]
simultaneous	Cheyenne, Harris Super, Starking	2[]
after (protandry)	Caddo, Oconee, Oklahoma	3[]

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
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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
<i>Example</i>		<i>(example to be inserted)</i>	<i>(example to be inserted)</i>

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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

A representative color photograph of the variety should accompany the Technical Questionnaire.

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

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8. Authorization for release

(a) Does the variety require prior authorization for release under legislation concerning the protection of the environment, human and animal health?

Yes [] No []

(b) Has such authorization been obtained?

Yes [] No []

If the answer to (b) is yes, please attach a copy of the authorization.

9. 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".

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

Applicant's name	<input type="text"/>		
Signature	<input type="text"/>	Date	<input type="text"/>