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INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS
GENEVA

PEACH

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Prunus persica (L.) Batsch

GUIDELINES

FOR THE CONDUCT OF TESTS

FOR DISTINCTNESS, UNIFORMITY AND STABILITY

Alternative Names: *

<i>Botanical name</i>	<i>English</i>	<i>French</i>	<i>German</i>	<i>Spanish</i>
<i>Prunus persica</i> (L.) Batsch, <i>Persica vulgaris</i> Mill., <i>Prunus</i> L. subg. <i>Persica</i>	Peach	Pêcher	Pfirsich	Durazno, Melocotonero

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, its associated TGP documents and the Test Guidelines for *Prunus* Rootstocks, document TG/187/1.

* 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 peach (including nectarine) of the species *Prunus persica* (L.) Batsch. For the examination of hybrids involving *Prunus persica* (L.) Batsch, guidance is provided in document TGP/13 “Guidance for New Types and Species”.

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 grafted trees, on a peach rootstock to be selected by the competent authorities.

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

5 grafted trees.

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. In particular, it is essential that the trees produce a satisfactory crop of fruit in each of the two 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 Because daylight varies, color determinations made against a color chart should be made either in a suitable cabinet providing artificial daylight or in the middle of the day in a room without direct sunlight. The spectral distribution of the illuminant for artificial daylight should conform with the CIE Standard of Preferred Daylight D 6500 and should fall within the tolerances set out in the British Standard 950, Part I. These determinations should be made with the plant part placed against a white background.

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) Flower: type (characteristic 9)
- (b) Petiole: shape of nectaries (characteristic 31)
- (c) Fruit: pubescence of skin (characteristic 44)
- (d) Fruit: carotenoid coloration of flesh (characteristic 51)

- (e) Fruit: acidity (characteristic 57) with the following groups:
 - low
 - medium
 - high
- (f) Fruit: flesh type (TQ characteristic), with the following groups:
 - melting
 - non-melting (pavies)
 - stony hard
- (g) Stone: adherence to flesh (characteristic 64)
- (h) Time of beginning of flowering (characteristic 67)
- (i) Time of maturity for consumption (characteristic 68)

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*

(*) Asterisk 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

(a)-(g) 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 ejemplos	Note/ Nota
1. (*)	Tree: size	Arbre : taille	Baum: Größe	Árbol: tamaño		
QN (a)	very small	très petit	sehr klein	muy pequeño	Bonanza	1
	small	petit	klein	pequeño	Richaven	3
	medium	moyen	mittel	mediano	Robin	5
	large	grand	groß	grande	Redhaven	7
	very large	très grand	sehr groß	muy grande	Champion	9
2. (+)	Tree: vigor	Arbre : vigueur	Baum: Wuchsstärke	Árbol: vigor		
QN	weak	faible	gering	débil	J. H. Hale	3
	medium	moyenne	mittel	medio	Robin	5
	strong	forte	stark	fuerte	Springtime	7
3. (*) (+)	Tree: habit	Arbre : port	Baum: Wuchsform	Árbol: porte		
QN (a)	upright	dressé	aufrecht	erecto	Nectarose, Pillar	1
	upright to spreading	dressé à étalé	aufrecht bis breitwüchsig	erecto hacia extendido	Fairhaven, Redwing	2
	spreading	étalé	breitwüchsig	extendido	Albertina, Elegant Lady, O'Henry	3
	drooping	retombant	überhängend	colgante	Charles Roux	4
	weeping	très retombant	lang überhängend	llorón	Biancopenulo	5
4.	Flowering shoot: thickness	Rameau mixte : grosueur	Blütentrieb: Dicke	Rama floral: grosor		
QN (a)	thin	fin	dünn	delgada	Mayred	3
	medium	moyen	mittel	media	Redhaven	5
	thick	gros	dick	gruesa	Flavorcrest, Lizzie	7

	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielsorten/ Variedades ejemplos	Note/ Nota
5.	Flowering shoot: length of internodes	Rameau mixte : longueur des entrenœuds	Blütentrieb: Länge der Internodien	Rama floral: longitud de los intranudos		
QN	(a) very short	très courts	sehr kurz	muy cortos	Bonanza	1
	(d) short	courts	kurz	cortos	June Gold, Merrill Sundance	3
	medium	moyens	mittel	medianos	Redhaven	5
	long	longs	lang	largos	Fairhaven	7
	very long	très longs	sehr lang	muy largos	Flacara	9
6.	Flowering shoot: presence of anthocyanin coloration	Rameau mixte : présence de la pigmentation anthocyanique	Blütentrieb: Vorhandensein von Anthocyanfärbung	Rama floral: presencia de pigmentación antociánica		
QL	(d) absent	absente	fehlend	ausente	De flor doble blanca	1
	present	présente	vorhanden	presente	Robin	9
7.	Flowering shoot: intensity of anthocyanin coloration	Rameau mixte : intensité de la pigmentation anthocyanique	Blütentrieb: Intensität der Anthocyanfärbung	Rama floral: intensidad de la pigmentación antociánica		
(+)						
QN	(d) weak	faible	gering	débil	Springtime	3
	medium	moyenne	mittel	media	Fuzalode	5
	strong	forte	stark	fuerte	Robin, Sanguine Chanas	7
8.	Flowering shoot: density of flower buds	Rameau mixte : densité des boutons floraux	Blütentrieb: Dichte der Blütenknospen	Rama floral: densidad de los botones florales		
(+)						
QN	(a) very sparse	très peu dense	sehr locker	muy laxa	Monline	1
	(d) sparse	peu dense	locker	laxa	O'Henry, Zaitabo	3
	medium	moyenne	mittel	media	Craucail, Flacara, Michelini, Rich Lady	5
	dense	dense	dicht	densa	Momée	7
	very dense	très dense	sehr dicht	muy densa	Armking, Harco	9

	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielsorten/ Variedades ejemplos	Note/ Nota
9. (* (+)	Flower: type	Fleur : type	Blüte: Typ	Flor: tipo		
QL	(d) campanulate	campanulée	glockenförmig	acampanada	Dida, Springtime	1
	(e) rosette	rosacée	rosettenförmig	roseta	Robin, Vesuvio	2
10. (* (+)	Corolla: main color (inner side)	Corolle : couleur principale (face interne)	Blütenkrone: vorwiegende Farbe (Innenseite)	Corola: color principal (cara interna)		
PQ	(d) white	blanc	weiß	blanco	Biancopedulo, De flor doble blanca	1
	(e) very light pink	rose très pale	sehr hellrosa	rosa muy claro	Cardinal	2
	light pink	rose pale	hellrosa	rosa claro	Michelini	3
	medium pink	rose moyen	mittelrosa	rosa medio	Alexia, Fuzalode	4
	dark pink	rose foncé	dunkelrosa	rosa oscuro	Flacara, Vivian	5
	violet pink	rose violacé	violettrosa	rosa violáceo	Candor	6
	red	rouge	rot	rojo	Red Flower Peach	7
11. (* (+)	Petal: shape	Pétale : forme	Blütenblatt: Form	Pétalo: forma		
PQ	(d) narrow ovate	ovale étroit	schmal eiförmig	oval estrecho		1
	(e) medium ovate	ovale moyen	mittel eiförmig	oval medio		2
	narrow elliptic	elliptique étroit	schmal elliptisch	elíptico estrecho		3
	medium elliptic	elliptique moyen	mittel elliptisch	elíptico medio		4
	circular	rond	rund	circular		5
12. (+)	<u>Only varieties with flower type: campanulate:</u> Petal: width	<u>Seulement pour les variétés à fleurs campanulées :</u> Pétale : largeur	<u>Nur Sorten mit glockenförmigem Blütentyp:</u> Blütenblatt: Breite	<u>Sólo variedades con tipo de flor: acampanada:</u> Pétalo: anchura		
QN	(d) very narrow	très étroit	sehr schmal	muy estrecho		1
	(e) narrow	étroit	schmal	estrecho	Meydicte	2
	medium	moyen	mittel	medio	Bradgust	3
	broad	large	breit	ancho	Monnail	4
	very broad	très large	sehr breit	muy ancho		5

	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielsorten/ Variedades ejemplos	Note/ Nota
13. (*) (+)	<u>Only varieties with flower type: rosette:</u> Petal: width	<u>Seulement pour les variétés à fleurs en rosette :</u> Pétale : largeur	<u>Nur Sorten mit rosettenförmigem Blütentyp:</u> Blütenblatt: Breite	<u>Sólo variedades con tipo de flor: roseta:</u> Pétalo: anchura		
QN	(d) very narrow	très étroit	sehr schmal	muy estrecho	Triumph	1
	(e) narrow	étroit	schmal	estrecho	Shasta	2
	medium	moyen	mittel	medio	Robin	3
	broad	large	breit	ancho	Michelini	4
	very broad	très large	sehr breit	muy ancho	Veteran	5
14. (*) (+)	Flower: number of petals	Fleur : nombre de pétales	Blütenblätter: Anzahl	Flor: número de pétalos		
QL	(d) five	cinq	fünf	cinco	Redhaven	1
	(e) more than five	plus de cinq	mehr als fünf	más de cinco	Red Flower Peach, Royal Glo	2
15. (+)	Stamen: position compared to petals	Étamines : position par rapport aux pétales	Staubgefäße: Stellung im Verhältnis zu den Blütenblättern	Estambre: posición relativa a los pétalos		
QN	(d) below	au-dessous	unterhalb	por debajo	Loring	1
	(e) at same level	au même niveau	auf gleicher Höhe	en el mismo nivel	Robin, Springtime	2
	above	au-dessus	oberhalb	por encima	Redhaven	3
16. (*) (+)	Stigma: position compared to anthers	Stigmate : position par rapport aux anthères	Narbe: Stellung im Verhältnis zu den Antheren	Estambre: posición relativa a las anteras		
QN	(d) below	au-dessous	unterhalb	por debajo	Vivian	1
	(e) same level	au même niveau	auf gleicher Höhe	en el mismo nivel	Crimson Gold	2
	above	au-dessus	oberhalb	por encima	Fuzalode	3
17. (*)	Anthers: pollen	Anthères : pollen	Antheren: Pollen	Anteras: polen		
QL	(d) absent	absent	fehlend	ausente	J. H. Hale	1
	(e) present	présent	vorhanden	presente	Redhaven	9

	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplos	Note/ Nota
18. (*)	Ovary: pubescence	Ovaire : pubescence	Fruchtknoten: Behaarung	Ovario: pubescencia		
QL	absent	absente	fehlend	ausente	Fuzalode	1
	present	présente	vorhanden	presente	Redhaven	9
19. (+)	Stipule: length	Stipule : longueur	Nebenblatt: Länge	Estípula: longitud		
QN (d)	short	court	kurz	corta	Redhaven	3
	(e) medium	moyen	mittel	media	Robin	5
	long	long	lang	larga	Dixired	7
20. (*) (+)	Leaf blade: length	Limbe longueur	Blattspreite: Länge	Limbo: longitud		
QN (b)	short	court	kurz	corto	Jeronimo	3
	medium	moyen	mittel	medio	Fairhaven	5
	long	long	lang	largo	Southland	7
21. (*) (+)	Leaf blade: width	Limbe : largeur	Blattspreite: Breite	Limbo: anchura		
QN (b)	narrow	étroit	schmal	estrecho	Redhaven	3
	medium	moyen	mittel	medio	Robin	5
	broad	large	breit	ancho	Dixinel	7
22. (*) (+)	Leaf blade: ratio length/width	Limbe : rapport longueur/largeur	Blattspreite: Verhältnis Länge/Breite	Limbo: relación longitud/anchura		
QN (b)	low	petit	klein	pequeña	Mountaingold	3
	medium	moyen	mittel	media	Early Sungrand	5
	high	grand	groß	grande	Springtime, Vivian	7
23. (+)	Leaf blade: shape in cross section	Limbe : forme en section transversale	Blattspreite : Form im Querschnitt	Limbo: forma en sección transversal		
QL (b)	concave	concave	konkav	cóncavo	Merrill Gemfree	1
	flat	droite	eben	plano	Mayred	2

	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplos	Note/ Nota
24.	Leaf blade: margin	Limbe : bord	Blattspreite: Rand	Limbo: borde		
(+)						
PQ	(b) crenate	crénelé	gekerbt	crenado	Crimson Glo	1
	shallow serrate	denté peu profond	flach gesägt	poco serrado	Fiesta Red	2
	deep serrate	profondément denté	tief gesägt	muy serrado	Flor de Guaid	3
25.	Leaf blade: angle at base	Limbe : angle à la base	Blattspreite: Winkel an der Basis	Limbo: ángulo en la base		
(+)						
QN	(b) acute	aigu	spitz	agudo	Springtime	1
	right angle	à angle droit	rechtwinklig	ángulo recto	Redhaven	2
	obtuse	obtus	stumpf	obtuso	Merrill Fransiscan	3
26.	Leaf blade: angle at apex	Limbe : angle au sommet	Blattspreite: Winkel an der Spitze	Limbo: ángulo en el ápice		
QN	(b) small	petit	klein	pequeño	Red June	3
	medium	moyen	mittel	medio	Earlired	5
	large	grand	groß	grande	Merrill Franciscan	7
27.	Leaf blade: color	Limbe : couleur	Blattspreite: Farbe	Limbo: color		
PQ	(b) greenish yellow	jaune verdâtre	grünlichgelb	amarillo verdoso	Redhaven	1
	light green	vert clair	hellgrün	verde claro	Silver Fire	2
	medium green	vert moyen	mittelgrün	verde medio	Robin	3
	dark green	vert foncé	dunkelgrün	verde oscuro	Fiesta Red	4
	purplish red	rouge pourpre	purpurrot	rojo purpúreo	Rubira	5
28.	Leaf blade: red mid-vein on the lower side	Nervure principale rouge face inférieure	Blattspreite: rote Hauptader auf der Unterseite	Limbo: nervio central rojo en el envés		
QL	(b) absent	absente	fehlend	ausente	Redhaven	1
	present	présente	vorhanden	presente	Sanguine Chanas	9

	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielsorten/ Variedades ejemplos	Note/ Nota
29.	Petiole: length	Pétiolle : longueur	Blattstiel: Länge	Peciolo: longitud		
(+)						
QN	short	court	kurz	corto	Redhaven	3
	medium	moyen	mittel	medio	Genadix 7	5
	long	long	lang	largo	Andross	7
30.	Petiole: nectaries	Pétiolle : nectaires	Blattstiel: Nektarien	Peciolo: nectarios		
(*)						
(+)						
QL	(c) absent	absente	fehlend	ausente	Crimson Glo, Tejon	1
	present	présente	vorhanden	presente	Redhaven	9
31.	Petiole: shape of nectaries	Pétiolle : forme des nectaires	Blattstiel: Form der Nektarien	Peciolo: forma de los nectarios		
(*)						
(+)						
QL	(c) round	circulaires	rund	circulares	Springtime	1
	reniform	réniformes	nierenförmig	reniformes	Redhaven	2
32.	Fruit: size	Fruit : taille	Frucht: Größe	Fruto: tamaño		
(*)						
QN	(f) very small	très petit	sehr klein	muy pequeño	Nectarine-Cerise	1
	small	petit	klein	pequeño	Minastar, Springtime	3
	medium	moyen	mittel	mediano	Momée, Springlady, Sunhaven	5
	large	grand	groß	grande	Loring, Royalglory, Zaitabo	7
	very large	très grand	sehr groß	muy grande	Comanche, Maillarbig	9
33.	Fruit: shape (in ventral view)	Fruit : forme (vue ventrale)	Frucht: Form (in Bauchansicht)	Fruto: forma (en vista ventral)		
(*)						
(+)						
PQ	(f) broad oblate	aplatis large	breit abgeflacht	achatado ancho	Alex, Bailou, UFO3	1
	medium oblate	moyennement aplatis	mittel abgeflacht	achatado medio	Herastrau, Robin	2
	circular	rond	rund	circular	Redwing	3
	broad elliptic	elliptique large	breit elliptisch	elíptico ancho	Cavalier	4
	medium elliptic	moyennement elliptique	mittel elliptisch	elíptico medio	Elberta	5

	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielsorten/ Variedades ejemplos	Note/ Nota
34.	Fruit: mucron tip at pistil end	Fruit : mucron à l'extrémité du pistil	Frucht: aufgesetzte Spitze am Kelchende	Fruto: punta del mucrón en el extremo del pistilo		
(+)						
QL	(f) absent	absent	fehlend	ausente	Robin	1
	present	présent	vorhanden	presente	Jersey Land, Springtime	9
35.	Fruit: shape of pistil end (excluding mucron tip)	Fruit : forme de l'extrémité pistillaire (mucron non compris)	Frucht: Form des Kelchendes (außer aufgesetzte Spitze)	Fruto: forma del extremo del pistilo (la punta del mucrón excluida)		
(+)						
	prominently pointed	nettement pointue	deutlich zugespitzt	destacadamente puntiagudo	Jersey Land	1
	weakly pointed	faiblement pointue	schwach zugespitzt	débilmente puntiagudo	Springtime	2
	flat	plate	flach	plano	Redhaven	3
	weakly depressed	faiblement déprimée	schwach eingesenkt	débilmente hundido	Robin	4
	strongly depressed	fortement déprimée	stark eingesenkt	muy hundido	Bailou, UFO3	5
36.	Fruit: symmetry (viewed from pistil end)	Fruit : symétrie (vue de l'extrémité pistillaire)	Frucht: Symmetrie (vom Kelchende aus gesehen)	Fruto: simetría (vista desde el extremo del pistilo)		
(+)						
QN	(f) symmetric	symétrique	symmetrisch	simétrico	Redhaven	1
	moderately asymmetric	modérément asymétrique	etwas asymmetrisch	moderadamente asimétrico	Brittaney Lane, Jim Dandy	2
	strongly asymmetric	fortement asymétrique	stark asymmetrisch	muy asimétrico	Precoccissima Moretini	3
37.	Fruit: prominence of suture	Fruit : proéminence de la suture	Frucht: Ausprägung der Naht	Fruto: prominencia de la sutura		
QN	(f) weak	faible	gering	débil	Redhaven	3
	medium	moyenne	mittel	media		5
	strong	forte	stark	fuerte	Precocissima Moretini	7

	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielsorten/ Variedades ejemplos	Note/ Nota
38.	Fruit: depth of stalk cavity	Fruit : profondeur de la cavité pédicellaire	Frucht: Tiefe der Stielhöhe	Fruto: profundidad de la cavidad peduncular		
QN (f)	shallow	peu profonde	flach	poco profunda	Robin	3
	medium	moyenne	mittel	media	Triumph	5
	deep	profonde	tief	profunda	Southland	7
39.	Fruit: width of stalk cavity	Fruit : largeur de la cavité pédicellaire	Frucht: Breite der Stielhöhe	Fruto: anchura de la cavidad peduncular		
QN (f)	narrow	étroite	schmal	estrecha	Redhaven	3
	medium	moyenne	mittel	media	Maygrand	5
	broad	large	breit	ancha	Robin	7
40. (* (+)	Fruit: ground color of skin	Fruit : couleur de fond de l'épiderme	Frucht: Grundfarbe der Haut	Fruto: color de fondo de la piel		
PQ (f)	not visible	non visible	nicht sichtbar	no visible	Fiesta Red	1
	green	verte	grün	verde	Rubberima	2
	cream green	vert crème	cremegrün	verde crema	Carman	3
	greenish white	blanc verdâtre	grünlichweiß	blanco verdoso	Morton	4
	cream white	blanc crème	cremeweiß	blanco crema	Antonia, Michelini	5
	cream	crème	cremefarben	crema	Amsden	6
	pink white	blanc rosé	rosaweiß	blanco rosado	Précoce de Hale	7
	greenish yellow	jaune verdâtre	grünlichgelb	amarillo verdoso	Veteran	8
	cream yellow	jaune crème	cremegelb	amarillo crema	Fuzalode	9
	yellow	jaune	gelb	amarillo	Sudanell	10
	orange yellow	jaune orange	orange gelb	amarillo anaranjado	Redtop, Victoria	11

	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielsorten/ Variedades ejemplos	Note/ Nota
41. (*) (+)	Fruit: relative area of over color of skin	Fruit : extension relative de la couleur du lavis	Frucht: Anteil der Deckfarbe der Haut	Fruto: extensión relativa del color de superficie de la piel		
QN	(f) absent or very small	absente ou très petite	fehlend oder sehr klein	ausente o muy pequeña	Veteran	1
	small	petit	klein	pequeña	Amsden	3
	medium	moyen	mittel	mediana	Redhaven	5
	large	grand	groß	grande	Redtop	7
	very large	très grand	sehr groß	muy grande	Rich Lady, Zaitabo	9
42.	Fruit: hue of over color of skin	Fruit : teinte de la couleur du lavis de l'épiderme	Frucht: Ton der Deckfarbe der Haut	Fruto: tono del color de superficie de la piel		
PQ	(f) orange red	rouge orangé	orangerot	rojo anaranjado	Velvet	1
	pink	rosé	rosa	rosa	Genard	2
	pink red	rouge rosé	rosarot	rojo rosado	Fuzalode	3
	light red	rouge clair	hellrot	rojo claro	Redtop	4
	medium red	rouge moyen	mittelrot	rojo medio	Red Diamond	5
	dark red	rouge foncé	dunkelrot	rojo oscuro	Redwing	6
	blackish red	rouge vineux	schwärzlichrot	rojo negruzco	Monec, Monid	7
43. (+)	Fruit: pattern of over color of skin	Fruit : répartition de la couleur du lavis de l'épiderme	Frucht: Muster der Deckfarbe der Haut	Fruto: distribución del color de superficie de la piel		
PQ	(f) solid flush	en plages continues	ganzflächig	de manera puramente uniforme	Flavorcrest	1
	mottled	moucheté	punktiert	jaspeado	Merill Sundance	2
	striped	en stries	gestreift	estriado	Velvet	3
	marbled	marbré	marmoriert	marmóreo	Genadix 7	4
44. (*)	Fruit: pubescence of skin	Fruit : pubescence de l'épiderme	Frucht: Behaarung der Haut	Fruto: pubescencia de la piel		
QL	(f) absent	absente	fehlend	ausente	Daisy, Fantasia, Monco, Zaitabo	1
	present	présente	vorhanden	presente	Merspri, Moncav, Rich May	9

	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielsorten/ Variedades ejemplos	Note/ Nota
45. (*)	Fruit: density of pubescence of skin	Fruit : densité de la pilosité de l'épiderme	Frucht: Dichte der Behaarung der Haut	Fruto: densidad de la pubescencia de la piel		
QN	(f) very sparse	très faible	sehr gering	muy baja	Merrill Gemfree	1
	sparse	faible	gering	baja	Suncrest	3
	medium	moyenne	mittel	media	Dixired	5
	dense	forte	stark	densa	Earlyvee, Veteran	7
	very dense	très forte	sehr stark	muy densa	Arp Beauty, Triumph	9
46.	<u>Only varieties with fruit pubescence:</u> absent: Fruit: glossiness	<u>Seulement les variétés sans pilosité :</u> Fruit : <u>brillance</u>	<u>Nur Sorten mit Fruchtbehaarung :</u> <u>fehlend: Frucht: Glanz</u>	<u>Sólo variedades con pubescencia en el fruto: ausente:</u> Fruto: <u>brillo</u>		
QN	(f) absent or weak	absente ou faible	fehlend oder schwach	ausente o débil		1
	medium	moyenne	mittel	medio		2
	strong	forte	stark	fuerte		3
47. (+)	<u>Only varieties with fruit pubescence:</u> absent: Fruit: conspicuousness of lenticels	<u>Seulement les variétés sans pilosité :</u> Fruit : <u>netteté des lenticelles</u>	<u>Nur Sorten mit Fruchtbehaarung :</u> <u>fehlend: Frucht: Ausprägung der Lentizellen</u>	<u>Sólo variedades con pubescencia en el fruto: ausente:</u> Fruto: <u>visibilidad de las lenticelas</u>		
QN	weak	faible	schwach	débil	Flavortop	1
	medium	moyenne	mittel	media	Ruby Diamond	2
	strong	forte	stark	fuerte	Royal gem	3
48. (+)	Fruit: thickness of skin	Fruit : épaisseur de l'épiderme	Frucht: Dicke der Haut	Fruto: grosor de la piel		
QN	(f) thin	faible	dünn	fina	Fuzalode	1
	medium	moyenne	mittel	media	Mme Girerd	2
	thick	forte	dick	gruesa	Carman	3

	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplos	Note/ Nota
49.	Fruit: adherence of skin to flesh	Fruit : adhérence de l'épiderme à la chair	Frucht: Haften der Haut am Fleisch	Fruto: adherencia de la piel a la pulpa		
QN	(f) very weak	très faible	fehlend oder sehr gering	muy débil	Mme Girerd	1
	weak	faible	gering	débil	Redhaven	3
	medium	moyenne	mittel	media	Early Sungrand	5
	strong	forte	stark	fuerte	Babygold 5	7
	very strong	très forte	sehr stark	muy fuerte	Vivian	9
50.	Fruit: firmness of flesh	Fruit : fermeté de la chair	Frucht: Festigkeit des Fleisches	Fruto: firmeza de la pulpa		
QN	(f) very soft	très molle	sehr weich	muy blanda	Amsden	1
	soft	molle	weich	blanda	Fairhaven	3
	medium	moyenne	mittel	media	Redhaven	5
	firm	ferme	fest	firme	Redtop	7
	very firm	très ferme	sehr fest	muy firme	Babygold 6, Vivian	9
51.	Fruit: carotenoid coloration of flesh	Fruit : couleur des caroténoïdes de la chair	Frucht: Karotenoidfärbung des Fleisches	Fruto: pigmentación de los carotenoides de la pulpa		
PQ	(f) greenish white	blanc verdâtre	grünlichweiß	blanco verdoso	Charles Roux	1
	white	blanche	weiß	blanco	Caldesi 2000, Springtime	2
	cream white	blanc crème	cremeweiß	blanco crema	Michelini	3
	light yellow	jaune clair	hellgelb	amarillo claro	Armking, Spring Gold	4
	yellow	jaune	gelb	amarillo	Early Sungrand	5
	orange yellow	jaune orange	orange gelb	amarillo anaranjado	Lovel, Merrill Franciscan	6
	orange	orange	orange	naranja	Sungold	7

	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielsorten/ Variedades ejemplos	Note/ Nota
52. (*) (+)	Fruit: anthocyanin coloration of flesh next to skin	Fruit : pigmentation anthocyanique sous-épidermique	Frucht: Anthocyanfärbung direkt unter der Haut	Fruto: pigmentación antociánica de la pulpa pegada a la piel		
QN	(f) absent or very weak	absente ou très faible	fehlend oder sehr gering	ausente o muy débil	Redhaven	1
	weak	faible	gering	débil	Daisy, Dolores, Monco	2
	strong	forte	stark	fuerte	Monalu, Monof, Rich May, Sanguine Chanas, Sanguine Vineuse, Zairegem	3
53. (*) (+)	Fruit: anthocyanin coloration of flesh in central part of flesh	Fruit : pigmentation anthocyanique de la partie centrale de la chair	Frucht: Anthocyanfärbung des Fleisches im mittleren Teil des Fruchtfleisches	Fruto: pigmentación antociánica de la parte central de la pulpa		
QN	(f) absent or very weak	absente ou très faible	fehlend oder sehr gering	ausente o muy débil	Robin	1
	weak	faible	gering	débil	Dolores, Monco	2
	strong	forte	stark	fuerte	Monof, Zairegem	3
54. (*) (+)	Fruit: anthocyanin coloration of flesh around stone	Fruit : pigmentation anthocyanique de la chair autour du noyau	Frucht: Anthocyanfärbung im Bereich des Steines	Fruto: pigmentación antociánica de la pulpa alrededor del hueso		
QN	(f) absent or weak	absente ou faible	fehlend oder gering	ausente o débil	Springtime	1
	medium	moyenne	gering	media	Ryan Sun	2
	strong	forte	stark	fuerte	Summer Lady, Zaipeo	3
55.	Fruit: flesh fiber	Fruit : chair fibreuse	Frucht: Fleischfasern	Fruto: pulpa fibrosa		
QN	(f) absent or weak	absente ou faible	fehlend oder schwach	ausente o débil	Redhaven	1
	moderate	modérée	mäßig	moderada		2
	strong	forte	stark	fuerte	Sunhigh	3

	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplos	Note/ Nota
56.	Fruit: sweetness	Fruit : goût sucré	Frucht: Süße	Fruto: dulzor		
(+)						
QN	(f) low	faible	gering	bajo	Alexandra, Armking, Merryl Gemfree	1
	medium	moyen	mittel	medio	Dixired, Redhaven	2
	high	fort	stark	alto	Maillardoux, Philp	3
57.	Fruit: acidity	Fruit : acidité	Frucht: Säure	Fruto: acidez		
(*)						
(+)						
QN	(f) very low	très faible	sehr gering	muy baja	Ambre, Kevine, Monam, Moncav, Nacre, Opale, Redwing, Zaiboni	1
	low	faible	gering	baja	Felicia, Maillarboom, Monnude, Monprime, Zaifuro, Zairesu	2
	medium	moyenne	mittel	media	O'Henry, Ryan Sun, Zaitabo	3
	high	forte	stark	alta	Craucail, Hermione, Nectaross, Orion, Primerose, Rich May, Zainara	4
	very high	très forte	sehr stark	muy alta	Armking, Bracid, Maycrest, Red Robin, Savana Red, Star Bright, Zaibri, Zaitop	5
58.	Stone: size compared to fruit	Noyau : taille par rapport à celle du fruit	Stein: Größe im Verhältnis zur Frucht	Hueso: tamaño con respecto al fruto		
(*)						
(+)						
QN	(g) small	petit	klein	pequeño	Alex, Robin	3
	medium	moyen	mittel	mediano	Redhaven	5
	large	gros	groß	grande	Somervee	7

	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplos	Note/ Nota
59. (*) (+)	Stone: shape (in lateral view)	Noyau : forme (vue latérale)	Stein: Form (in Seitenansicht)	Hueso: forma (en vista lateral)		
PQ	(g) oblate	aplatis	abgeflacht	plano	Alex, Bailou, UFO 3	1
	circular	rond	rund	circular	Robin	2
	elliptic	elliptique	elliptisch	elíptico	Loring	3
	obovate	obovoïde	verkehrt eiförmig	oboval	Rubidoux	4
60.	Stone: anthocyanin coloration	Noyau : pigmentation anthocyanique	Stein: Anthocyanfärbung	Hueso: pigmentación antociánica		
QN	(g) absent or very weak	absente ou très faible	fehlend oder sehr schwach	ausente o muy débil	Oom Sarel	1
	weak	faible	schwach	débil	Alpine	3
	medium	moyenne	mittel	media	Jim Dandy	5
	strong	forte	stark	fuerte	Margaret's Pride	7
	very strong	très forte	sehr stark	muy fuerte	Arctic Red	9
61. (+)	Stone: intensity of brown color	Noyau : intensité de la couleur brune	Stein: Intensität der Braunfärbung	Hueso: intensidad del color marrón		
QN	(g) light	claire	hell	claro	Robin	3
	medium	moyenne	mittel	medio	Alexia, Amalia, Victoria	5
	dark	foncée	dunkel	oscuro	Vivian	7
62. (+)	Stone: relief of surface	Noyau : relief de la surface	Stein: Aussehen der Oberfläche	Hueso: relieve de la superficie		
PQ	(g) only pits	uniquement cavités	nur Gruben	únicamente hoyos		1
	predominantly pits	le plus souvent cavités	vorherrschend Gruben	predominio de hoyos		2
	equally pits and grooves	à la fois cavités et sillons	gleichmäßig Gruben und Furchen	igualdad de hoyos y surcos		3
	predominantly grooves	le plus souvent sillons	vorherrschend Furchen	predominio de surcos		4
	only grooves	uniquement sillons	nur Furchen	únicamente surcos		5

	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplos	Note/ Nota
63. (+)	Stone: tendency to split	Noyau : tendance à fendre	Stein: Tendenz zur Spaltung	Hueso: tendencia a fisurarse		
QN	(g) absent or very low	nul ou très faible	fehlend oder sehr gering	ninguna o muy débil	Fairhaven	1
	low	faible	gering	débil	Dixired	3
	medium	moyen	mittel	media	Springgold	5
	high	élevé	groß	elevada	Cardinal	7
	very high	très élevé	sehr groß	muy elevada	Earlired	9
64. (*)	Stone: adherence to flesh	Noyau : adhérence a la chair	Stein: Anhaften am Fleisch	Hueso: adherencia a la pulpa		
QL	(g) absent	absente	fehlend	ausente	Fairhaven, Fuzalode	1
	present	présente	vorhanden	presente	Sweet Gold, Vivian	9
65.	Stone: degree of adherence to flesh	Noyau : degré d'adhérence a la chair	Stein: Stärke des Anhaftens am Fleisch	Hueso: grado de adherencia a la pulpa		
QN	(g) weak	faible	gering	débil	Dixired	3
	medium	moyenne	mittel	media	Springcrest	5
	strong	forte	stark	fuerte	Vivian	7
66. (+)	Time of beginning of leaf bud burst	Époque de début de débourrement foliaire	Zeitpunkt des Aufbrechens der vegetativen Knospe	Época de comienzo de la brotación de la yema foliar		
QN	very early	très précoce	sehr früh	muy temprana	Sunred	1
	early	précoce	früh	temprana	Springtime	3
	medium	moyenne	mittel	media	Redhaven	5
	late	tardive	spät	tardía	Genadix 7	7
	very late	très tardive	sehr spät	muy tardía	Philp	9

English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplos	Note/ Nota	
67. (* (+)	Time of beginning of flowering	Époque de début de floraison	Zeitpunkt des Blühbeginns	Época de comienzo de la floración		
QN	very early	très précoce	sehr früh	muy temprana	Zaibop, Zaitolio	1
	early	précoce	früh	temprana	Rich Lady, Springtime	3
	medium	moyenne	mittel	media	Monnude, Zaitabo	5
	late	tardive	spät	tardía	Maillarflat, Maillarlau	7
	very late	très tardive	sehr spät	muy tardía	Summerqueen	9
68. (* (+)	Time of maturity for consumption	Époque de maturité pour la consommation	Zeitpunkt der Genußreife	Época de madurez para el consumo		
QN	very early	très précoce	sehr früh	muy temprana	Rich May, Springtime, Zaibaro	1
	very early to early	très précoce à précoce	sehr früh bis früh	de muy temprana a temprana	Zainoar, Zaitani	2
	early	précoce	früh	temprana	Antonia, Redwing, Rich Lady, Robin	3
	early to medium	précoce à moyenne	früh bis mittel	de temprana a media	Craucail, Diamond Princess	4
	medium	moyenne	mittel	media	Fairhaven, Fantasia, Summer Bright, Zee Lady	5
	medium to late	moyenne à tardive	mittel bis spät	de media a tardía	Maillarbig, Savana Red, Zaimor	6
	late	tardive	spät	tardía	Fairlane, Flacara, Veteran, Western red, Zailati, Zairova	7
	late to very late	tardive à très tardive	spät bis sehr spät	de tardía a muy tardía	Andgold, Tardibelle	8
	very late	très tardive	sehr spät	muy tardía	Firetime, Rubidoux	9

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) Observations should be made during winter dormancy.
- (b) Observations on the leaf should be made on fully developed leaves in the central third of a current season shoot.
- (c) Observations on the nectaries (glands) should be made on leaves as soon as they are fully developed.
- (d) Observations on the flowering shoot and the flower should be made in the central third of the shoot.
- (e) Observations on the flower should be made on fully opened flowers at the beginning of anther dehiscence.
- (f) Observations on the fruit should be made on fruit that are mature for consumption (see Ad. 68).
- (g) Observations on the stone should be made on the dry stone after removal of the flesh.

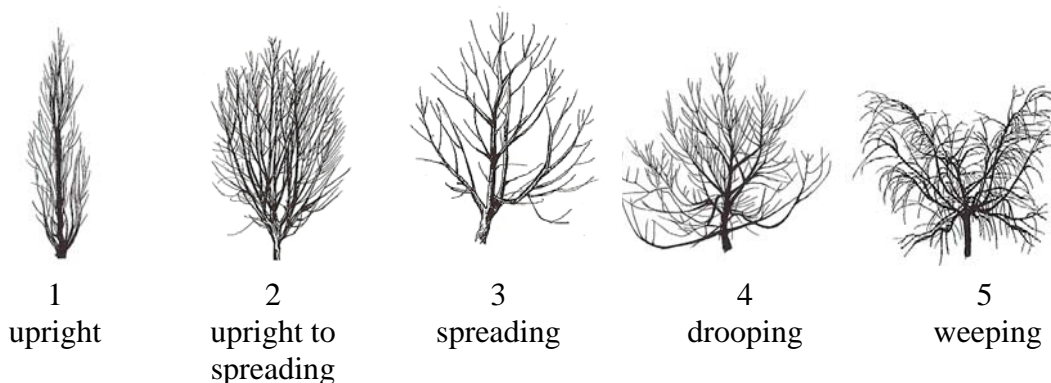
8.2 *Explanations for individual characteristics*

Ad. 2: Tree: vigor

The vigor of the tree should be considered as the overall abundance of vegetative growth, during the growing period.

Ad. 3: Tree habit

To be observed the year before the main pruning.



Ad. 7: Flowering shoot : intensity of anthocyanin coloration

The intensity of anthocyanin coloration should be observed on the shaded side of the shoot.

Ad. 8: Flowering shoot: density of flower buds

To be observed along the shoot on one meter.



3
sparse



7
dense

Ad. 9: Flower: type

‘Campanulate’ (bell-shaped) is also referred to as ‘nonshowy’ : these types have small petals and stamens often higher than the petals.

‘Rosette’ (rose-shaped) is also referred to as ‘showy’ : these types have large petals.



1
campanulate
(nonshowy)



2
rosette
(showy)

Ad. 1 : Corolla: main color (inner side)

The main color is the color with the largest surface area.

Ad. 11: Petal: shape



1
narrow ovate



2
medium ovate



3
narrow elliptic



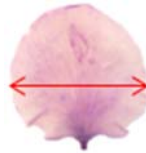
4
medium elliptic



5
circular

Ad. 12: Only varieties with flower type : campanulate: Petal: width

Ad. 13: Only varieties with flower type: rosette: Petal: width



Ad. 14: Flower: number of petals



1
five



2
more than five



Varieties with note 1 may have occasional flowers with more than 5 petals and varieties with note 2 may have occasional flowers with five petals.

Ad. 15: Stamen: position compared to petals



1
below



2
at same level



3
above

Ad. 16: Stigma: position compared to anthers

To be observed on 5 flowers per tree.



1
below



2
same level



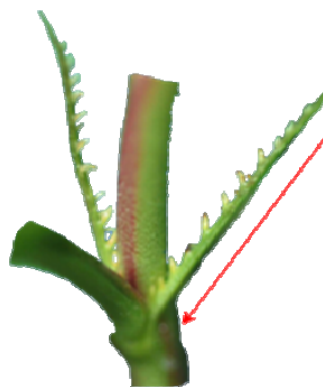
3
above

Ad. 19: Stipule: length

The length of stipule should be observed on a fully expanded leaf on a young shoot.
The characteristic should be observed on 5 stipules per tree.

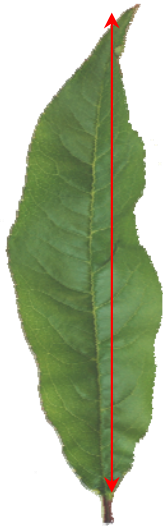


5
medium

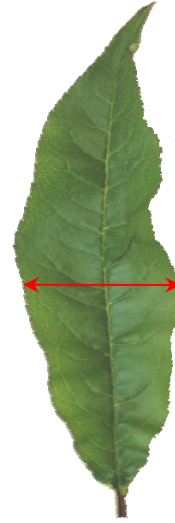


7
long

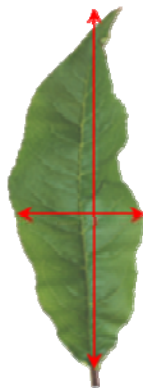
Ad. 20: Leaf blade: length



Ad. 21: Leaf blade: width



Ad. 22: Leaf blade: ratio length/width



3
low

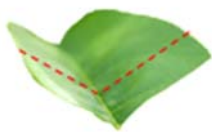


5
medium



7
high

Ad. 23: Leaf blade: shape in cross section



concave



flat

Ad. 24: Leaf blade: margin



1
crenate

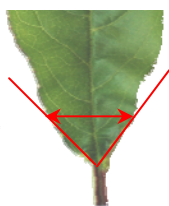


2
shallow serrate

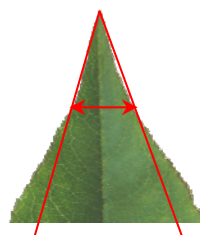


3
deep serrate

Ad. 25: Leaf blade: angle at base



Ad. 26: Leaf blade: angle at apex

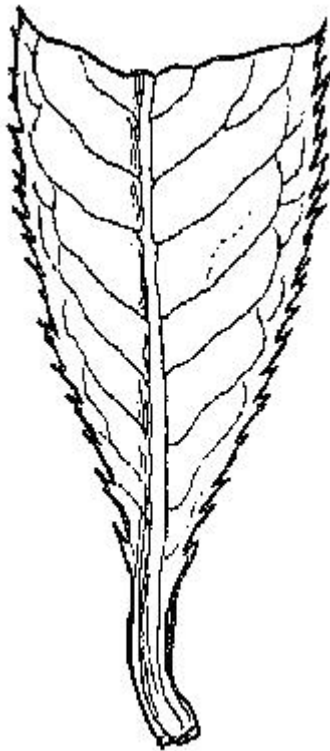


Ad. 29: Petiole: length

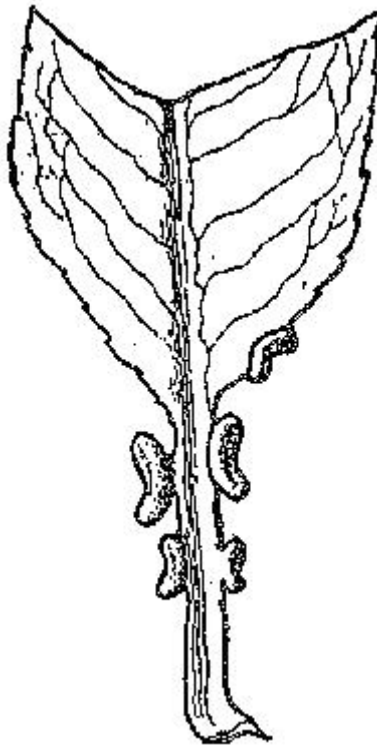
To be evaluated on 5 leaves per tree.



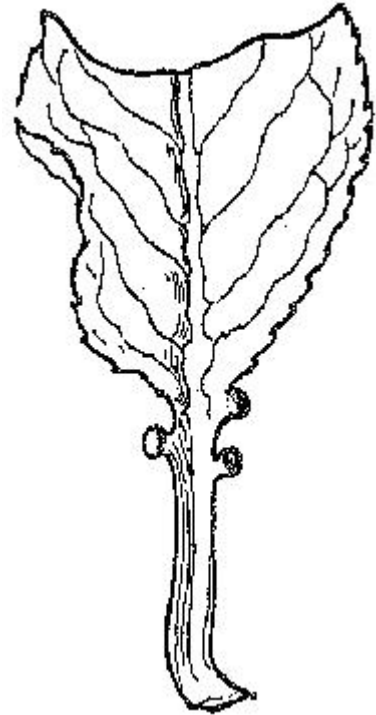
Ad. 30: Petiole: nectaries



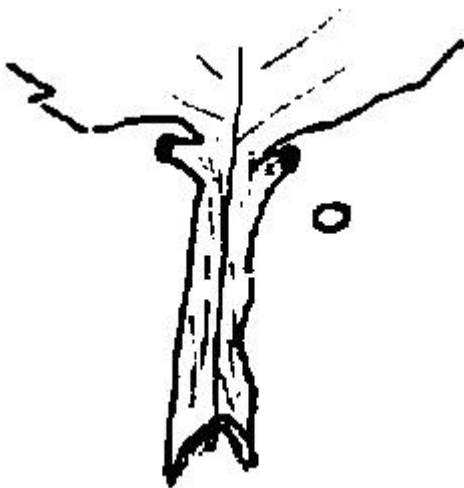
1
absent



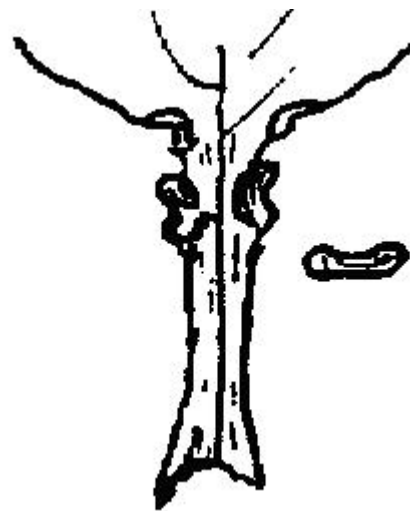
9
present



Ad. 31: Petiole: shape of nectaries

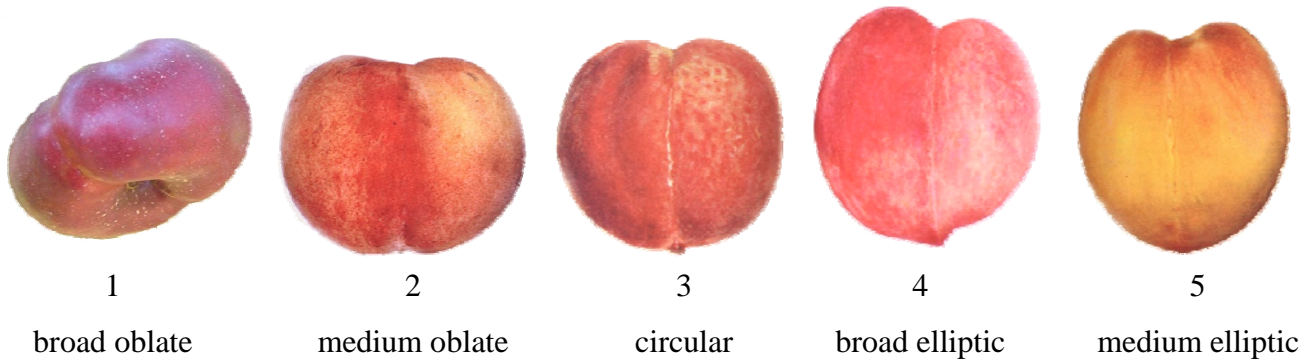


1
round



2
reniform

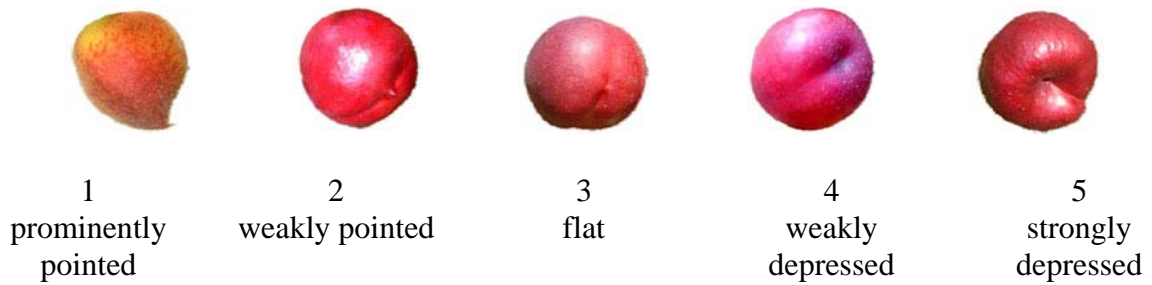
Ad. 33: Fruit: shape (in ventral view)



Ad. 34: Fruit: mucron tip at pistil end



Ad. 35: Fruit: shape of pistil end (excluding mucron tip)



Ad. 36: Fruit: symmetry (viewed from pistil end)



Ad. 40: Fruit: ground color of skin

The ground color is the first color to appear chronologically during the development of the skin and upon which the over color will develop in time. It is not always necessarily the largest area of the skin.

Ad. 41: Fruit: relative area of over color of skin



3
small



5
medium



7
large

Ad. 43: Fruit: pattern of over color



1
solid flush



2
mottled



3
striped



4
marbled

Ad. 47: Only varieties with fruit pubescence: absent: Fruit: conspicuousness of lenticels



1
weak



2
medium



3
strong

The conspicuousness of lenticels is determined by the size and the color contrast.

Ad. 48: Fruit: thickness of skin

excluding pubescence



Ad. 50: Fruit: firmness of flesh

To be observed at eating ripeness with a penetrometer.

Ad. 52: Fruit: anthocyanin coloration of flesh next to skin



1

absent or very weak



2

weak



3

strong

Ad. 53: Fruit: anthocyanin coloration of flesh in central part of flesh



1

absent or very weak



2

weak



3

strong

Ad. 54: Fruit: anthocyanin coloration of flesh around stone



1

absent or weak



2

medium



3

strong

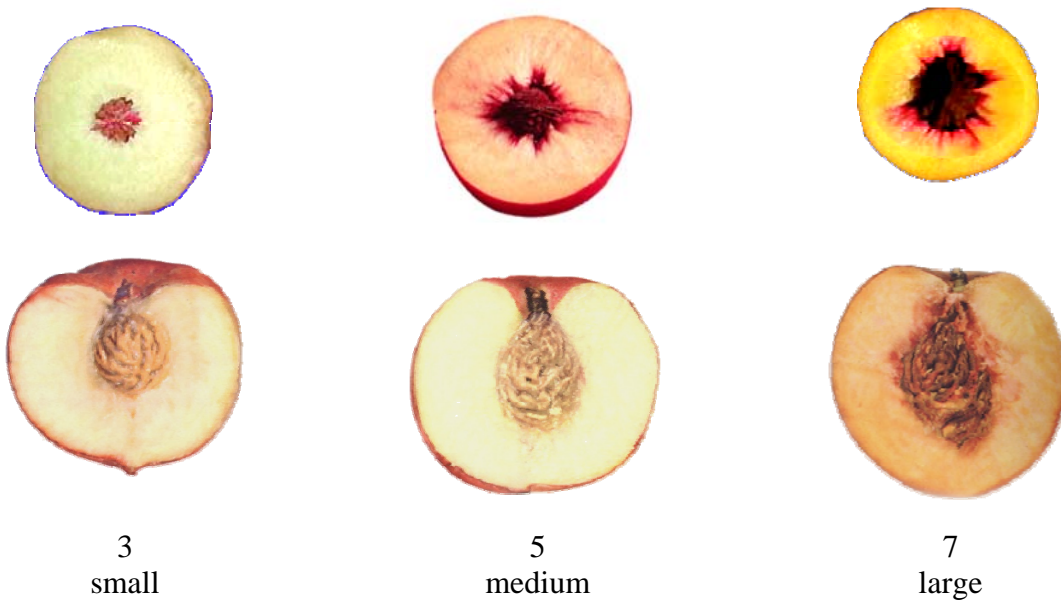
Ad. 56: Fruit: sweetness

The sweetness of the fruit should be observed in degrees Brix.

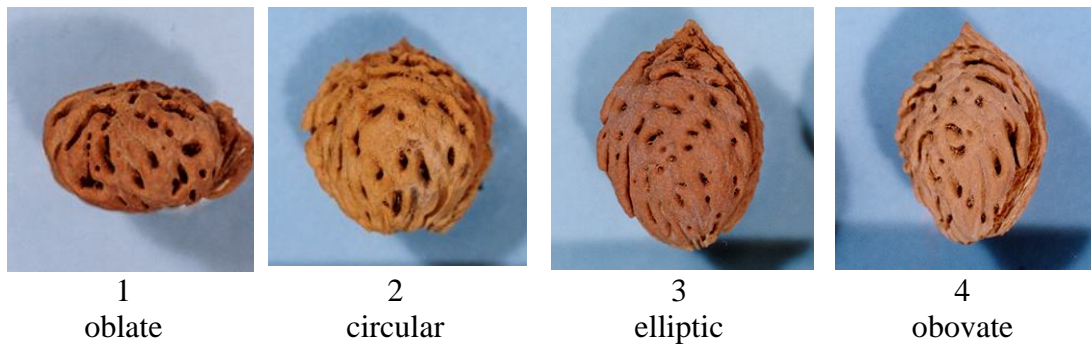
Ad. 57: Fruit: acidity

The acidity of the fruit should be observed as the titrable acidity in meq 100/ml.

Ad. 58: Stone: size compared to fruit



Ad. 59: Stone: shape (in lateral view)



Ad. 61: Stone: intensity of brown color

To be observed on fresh stones.



3
light



5
medium



7
dark

Ad. 62: Stone: relief of surface



pits



grooves



pits and grooves

Ad. 63: Stone: tendency to split

Evaluated by the percentage of fruits having a split stone at the time of peak harvest.

Ad. 66: Time of beginning of leaf bud burst

The time of the beginning of leaf bud burst should be observed as the appearance of first leaves on all trees.

Ad. 67: Time of beginning of flowering

The time of beginning of flowering is when all trees have 10% open flowers.

Ad. 68: Time of maturity for consumption

The time of maturity for consumption is when the overall appearance, firmness and taste indicate that the fruit is ready for consumption.

9. Literature

- Bellini E., Scaramuzzi, F., 1975: Pesca. Enciclopedia agraria italiana VIII, Roma, IT.
- Bellini, E., 1981: Il pesco. Cultivar. R.E.D.A., Roma, IT, pp. 9-90.
- Bellini, E., Scaramuzzi, F. 1976: Monografia delle principali cultivar di pesco. Vol. II., C.N.R., Firenze, IT, 564 pp.
- Blaha, J., 1966: Broskovone, merunky, mandlone (peach, apricot, almond). Ceskoslovenska Akademie VED, Praha, Czechoslovakia, 438 pp.
- Brozik, S., Termesztett gyumolcsfajtáink 2. Csonthejastermesűek. Oszibarack (Fruit varieties 2., stone fruits peach)," Mezogazdasági Kiadó, Budapest, HU, 64 pp.
- Caillavet, H., 1975: Variétés de pêcheurs. Maison de l'agriculture, Perpignan, 213 pp.
- Caillavet, H., Souty, J., 1950: Monographie des principales variétés de pêcher. Société Bordelaise d'Imprimerie, Bordeaux, FR, 416 pp.
- Childers, N.F., 1975: The peach, varieties, culture etc. 1 Tome.
- CTIFL, 2002: Les variétés de pêches et de nectarines. Ed. CTIFL, Paris, FR, 223 p.
- CTIFL, 1994: Pêche, les variétés et leur conduite. Ed. CTIFL, Paris, FR, 306 p.
- Fideghelli, C., Bassi, D., Bellini, E., Monastra, F., 1980: Schede per il registro varietale dei fruttiferi 2 – pesco. M.A.F.-S.O.I., Roma, IT, 104 pp.
- Fideghelli, C., Monastra, F., Faedi, W., Rosati, P., 1977: Monografia di cultivar di nettarine. Ministero Agricoltura e Foreste, Roma, IT, 88 pp.
- Hugard, J., Saunier, R., 1965: Monographie des principales variétés de pêcher. Période d'études 1950-1962, Institut national de la recherche agronomique (INRA), Paris, FR, 276 pp.
- IRTA, 2002: Melocotonero, las variedades de más interés. Ed. IRTA, Barcelona, ESP, 287 p.
- Ivascu, Antonia, 2003: Peach varieties catalog (catalogul soiurilor de pierfic), ed. Medro Ro, 110 p.
- Leroy, A., 1867: Dictionnaire de pomologie. 2 Tomes
- Loreti, F., Fiorino, P., 1972: Monografia delle principali cultivar di nettarine. C.N.R., Pisa, IT, 340 pp.
- Monet, R., 1983: Le pêcher. Génétique et physiologie. Ed. Masson, Paris, France
- Morettini, A., Baldini, E., Scaramuzzi, F., Bargioni, G., Pisani, P.L., 1972: Monografia delle principali cultivar di pesco. C.N.R., Firenze, IT, 636 pp.
- Morettini, A., et al., 1967: Monografia delle principali cultivar di pesco. Consiglio nazionale delle Ricerche. Centro miglioramento piante da frutto e da orto, Firenze, IT, 633 pp.

Okayama-ken, 1978: The report on the characterization and classification of peach varieties. Okayama-ken (By consignment of the MAFF), JP, 267 pp.

Sansavini, S., Bargioni, G., Basso, M., Fideghelli, C. et al., 1974: Pesche da industria. Ministero Agricoltura e Foreste, Bologna, IT, 136 pp.

Saunier, R., 1979: Variétés de pêchers, nectarines et poires. 1 Tome, Publication CTIFL, rue Bergère, Paris, FR

Seronie-Vivien, A., 1984: Etude morphologique et physiologique de différents types écologiques de pêchers et une de leur utilisation comme porte-greffe. DEA-INRA-Bordeaux, FR

Timon, B., 1976: Oszibarack (peach). Mezogazdasagi Kiado, Budapest, HU, 424 pp.

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	<input type="text" value="Prunus persica (L.) Batsch var. persica"/>	
1.1.2 Common name	<input type="text" value="Peach"/>	[...]
1.2.1 Botanical name	<input type="text" value="Prunus persica (L.) Batsch var. nucipersica (Suckow) C. K. Schneid."/>	
1.2.2 Common name	<input type="text" value="Nectarine"/>	[...]
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 Flower: type (9)		
campanulate	Dida, Springtime	1[]
rosette	Robin, Vesuvio	2[]
5.2 Petiole: shape of nectaries (31)		
round	Springtime	1[]
reniform	Redhaven	2[]
5.3 Fruit: pubescence of skin (44)		
absent	Daisy, Fantasia, Monco, Zaitabo	1[]
present	Merspri, Moncav, Rich May	9[]
5.4 Fruit: carotenoid coloration of flesh (51)		
greenish white	Charles Roux	1[]
white	Caldesi 2000, Springtime	2[]
cream white	Michelini	3[]
light yellow	Armking, Spring Gold	4[]
yellow	Early Sungrand	5[]
orange yellow	Lovel, Merril Franciscan	6[]
orange	Sungold	7[]

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:	
Characteristics	Example Varieties	Note	
5.5 Fruit: acidity (57)			
very low	Ambre, Kevine, Nacre, Opale, Redwing, Monam, Moncav, Zaiboni	1[]	
low	Felicia, Maillarboom, Monnude, Monprime, Zaifuro, Zairesu	2[]	
medium	O'Henry, Ryan Sun, Zaitabo	3[]	
high	Craucail, Hermione, Nectaross, Orion, Primerose, Rich May, Zainara	4[]	
very high	Armking, Bracid, Maycrest, Red Robin, Savana Red, Star Bright, Zaibri, Zaitop	5[]	
5.6 Fruit: flesh type			
melting		[]	
non-melting (pavies)		[]	
stony hard		[]	
5.7 Stone: adherence to flesh (64)			
absent	Fairhaven, Fuzalode	1[]	
present	Sweet Gold, Vivian	9[]	
5.8 Time of beginning of flowering (67)			
very early	Zaibop, Zaitolio	1[]	
early	Rich Lady, Springtime	3[]	
medium	Monnude, Zaitabo	5[]	
late	Maillarflat, Maillarlau	7[]	
very late	Summerqueen	9[]	

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
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Characteristics	Example Varieties	Note
5.9 Time of maturity for consumption (68)		
very early	Rich May, Springtime, Zaibaro	1[]
very early to early	Zainoar, Zaitani	2[]
early	Antonia, Redwing, Rich Lady, Robin	3[]
early to medium	Craucail, Diamond Princess	4[]
medium	Fairhaven, Fantasia, Summer Bright, Zee Lady	5[]
medium to late	Maillarbig, Savana red, Zaimor	6[]
late	Fairlane, Flacara, Veteran, Western red, Zailati, Zairova	7[]
late to very late	Andgold, Tardibelle	8[]
very late	Firetime, Rubidoux	9[]

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>Corolla: main color (inner side)</i>	<i>white</i>	<i>very light pink</i>

Comments:

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

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

7.3.2 Pollinator

Good pollinators are the following varieties

.....

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.

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

The variety is

- | | |
|--|-----|
| (i) virus free
(indicate viruses) | [] |
|
(ii) virus tested
(indicate against which virus) | [] |
|
(iii) The virus status is unknown | [] |

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]