

UPOV

TG/70/4(proj.2)

ORIGINAL: English

DATE: August 15, 2003

INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

GENEVA

DRAFT

APRICOT

Prunus armeniaca L.

*

GUIDELINES

FOR THE CONDUCT OF TESTS

FOR DISTINCTNESS, UNIFORMITY AND STABILITY

*to be considered by the
Technical Working Party for Fruits at its thirty-fourth session,
to be held in Niagara Falls, Canada, from September 29 to October 3, 2003*

Alternative Names:*

<i>Latin</i>	<i>English</i>	<i>French</i>	<i>German</i>	<i>Spanish</i>
<i>Prunus armeniaca</i> L. <i>Armeniaca vulgaris</i> Lam.	Apricot	Abricotier	Aprikose Marille	Albaricoquero

ASSOCIATED DOCUMENTS

These guidelines should be read in conjunction with document TG/1/3, "General Introduction to the Examination of Distinctness, Uniformity and Stability and the Development of Harmonized Descriptions of New Varieties of Plants" (hereinafter referred to as 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.]

<u>TABLE OF CONTENTS</u>	<u>PAGE</u>
1. SUBJECT OF THESE TEST GUIDELINES	3
2. MATERIAL REQUIRED	3
3. METHOD OF EXAMINATION	3
3.1 Duration of Tests	3
3.2 Testing Place	3
3.3 Conditions for Conducting the Examination	3
3.4 Test Design	4
3.5 Number of Plants / Parts of Plants to be Examined	4
3.6 Additional Tests.....	4
4. ASSESSMENT OF DISTINCTNESS, UNIFORMITY AND STABILITY	4
4.1 Distinctness.....	4
4.2 Uniformity	4
4.3 Stability	5
5. GROUPING OF VARIETIES AND ORGANIZATION OF THE GROWING TRIAL	5
6. INTRODUCTION TO THE TABLE OF CHARACTERISTICS	5
6.1 Categories of Characteristics	5
6.2 States of Expression and Corresponding Notes.....	6
6.3 Types of Expression	6
6.4 Example Varieties	6
6.5 Legend	6
7. TABLE OF CHARACTERISTICS	7
8. EXPLANATIONS ON THE TABLE OF CHARACTERISTICS.....	22
8.1 Explanations covering several characteristics	22
8.2 Explanations for individual characteristics.....	22
9. LITERATURE	30
10. TECHNICAL QUESTIONNAIRE	32

1. Subject of these Test Guidelines

These Test Guidelines apply to all varieties of *Prunus armeniaca* L.

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 one-year-old grafts, budsticks or dormant shoots for grafting.

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

5 trees (one-year-old grafts) or
3 budsticks or
5 dormant shoots for grafting, sufficient to propagate 5 trees.

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

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 *Duration of Tests*

The minimum duration of tests should normally be two independent growing cycles.

3.2 *Testing Place*

The tests should normally be conducted at one place. If any characteristics of the variety, which are relevant for the examination of DUS, cannot be observed at that place, the variety may be tested at an additional place.

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 3. In particular, in the case of fruit and stone characteristics, observations should be made on 25 fruits, five taken from each of five trees.

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 minimum duration of tests recommended in section 3.1 reflects, in general, the need to ensure that any differences in a characteristic are sufficiently consistent.

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-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 is 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) Fruit: size (characteristic 29);
- (b) Fruit: ground color of skin (characteristic 42);
- (c) Fruit: color of flesh (characteristic 46);
- (d) Time of beginning of flowering (characteristic 53);
- (e) Time of beginning of fruit ripening (characteristic 54).

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 Section 6.1.2

(QL) Qualitative characteristic – see Section 6.3

(QN) Quantitative characteristic – see Section 6.3

(PQ) Pseudo-qualitative characteristic – see Section 6.3

(a) – (d) See Explanations on the Table of Characteristics in Chapter 8, Section 8.1

(+) See Explanations on the Table of Characteristics in Chapter 8, Section 8.2

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

Char. No.	Method of Examination	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielsorten/ Variedades ejemplo	Note/ Nota	
1.	(a)	Tree: vigor						
	(+)							
QN		very weak				Sub-zero	1	
		weak				Cannetta, Polonais	3	
		medium				Rouge du Roussillon, Peeka, Bergeron	5	
		strong				Palsteyn, Earle Orange, Magyar kajszzi	7	
		very strong				Moniquí, Viceroy, Ceglédi bíbor	9	
2.	(a)	Tree: habit						
	(+)							
PQ		fastigate				Japan's Early	1	
		upright				Reale d'Imola, Earle Orange, Harcot	2	
		spreading				Blenheim, Hargrand, Magyar kajszzi	3	
		drooping				Palsteyn, Polonais, Vesna	4	
		weeping					5	
3.	(a)	Tree: branching						
QN		weak				Earle Orange, Roxana	3	
		medium				San Castrese, Bergeron, Magyar kajszzi	5	
		strong				Prevete, Veecot, Harlayne	7	

Char. No.	Method of Examination	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
4. (*)	(a)	Tree: distribution of flower buds					
PQ		predominantly on spurs				Monaco Bello, Sun Glo, Earle Orange	1
		equally on spurs and on one-year- old shoots				Palumella, Canino, Bergeron	2
		predominantly on one-year-old shoots				Ferriana, San Castrese, Roxana	3
5. (*)		Young shoot: anthocyanin coloration of apex (during rapid growth)					
QN		weak				Blenheim, Hargrand, Samarkandskij rannij	3
		medium				San Castrese, Polonais, Sun Glo	5
		strong				Ohaicos, Ceglédi bíbor, Roxana	7
6. (*)	(a)	One-year-old shoot: color on sunny side					
PQ		yellow brown				Grandir, Bebeco	1
		red brown				Palsteyn, Ceglédi óriás, Veecot	2
		purple brown				Royal, Harcot	3
7.	(a)	One-year-old shoot: size of bud support					
QN		small				Canino, Harcot	3
		medium				Palsteyn, Hargrand, Magyar kajszi	5
		large				Hamidi, Roxana, Ceglédi arany	7

Char. No.	Method of Examination	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
8.	(b)	Leaf blade: length					
QN		short				Early Biady, Samarkandskij rannij	3
		medium				Rouge du Roussillon, Canino, Veecot	5
		long				Moniquí, Ceglédi arany, Roxana	7
9.	(b)	Leaf blade: width					
QN		narrow				Rouget de Sernhac, Ceglédi bíbor, Veecot	3
		medium				Canino, Harcot, Veecot	5
		broad				Moniquí, Ceglédi Piroska	7
10.	(b)	Leaf blade: ratio length/width					
QN		very small				Canino, Búlida	1
		small				Cafona, Hargrand	3
		medium				San Castrese, Harcot	5
		large				Rouget de Sernhac, Ceglédi bíbor	7
		very large				Colorado Temprano, Precoce d'Imola	9
11.	(b)	Leaf blade: green color of upper side					
QN		light				Ivonne Liverani, Velasquez, Veecot	3
		medium				Flaming Gold, Harcot, Ceglédi óriás	5
		dark				Moniquí, Earle Orange	7

Char. No.	Method of Examination	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
12. (+)	(b)	Leaf blade: shape of base					
PQ		acute				Rouget de Sernhac, Ceglédi bíbor	1
		obtuse				Bhart, Magyar kajszzi	2
		truncate				Canino, Blenheim, Bergeron	3
		cordate				Búlida, Moniquí	4
13. (+)	(b)	Leaf blade: angle of apex (excluding tip)					
QN		acute				Boccuccia	1
		right-angled				Ceglédi óriás	2
		moderately obtuse				Polonais, Bergeron	3
		strongly obtuse				Moniquí, Hargrand	3
14.	(b)	Leaf blade: length of tip					
QN		absent or very short				Alpha	1
		short				Moniquí, Harmat, Bhart	3
		medium				Magyar kajszzi	5
		long				Ivonne Liverani, Roxana	7
15. (+)	(b)	Leaf blade: incisions of margin					
PQ		crenate				Verdun	1
		bicrenate				Búlida, Bhart	2
		serrate				Boccuccia	3
		biserrate				Hamidi, Roxana, Rakovszky	4

Char. No.	Method of Examination	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
16.	(b)	Leaf blade: undulation of margin					
QN		weak				Palsteyn, Harcot	3
		medium				Blenheim, Roxana	5
		strong				Piet Cillié, Polonais	7
17.	(b)	Leaf blade: profile in cross section					
(+)							
QN		straight or weakly concave				Rouget de Sernhac, Earle Orange	1
		moderately concave				Moniquí, Hâtif Colomer, Bergeron,	2
		strongly concave				Polonais	3
18.	(b)	Petiole: length					
(*)							
QN		short				Moniquí, San Francisco, Polonais	3
		medium				Frater, Cafona, Magyar kajszzi	5
		long				Búlida, Skopska Krupna	7
19.	(b)	Leaf: ratio length of blade /length of petiole					
QN		small				Rouget de Sernhac, Earle Orange	3
		medium				Hâtif Colomer, Rouge du Roussillon, Magyar kajszzi	5
		large				Moniquí, Polonais	7
20.	(b)	Petiole: thickness					
QN		thin				Pineapple	3
		medium				Colomar, Veeçot, Harcot	5
		thick				Búlida, Moniquí, Ceglédi arany	7

Char. No.	Method of Examination	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
21.	(b)	Petiole: anthocyanin coloration of upper side					
QN		weak					3
		medium				Frater, Borsi rózsa	5
		strong				Early Biady, Ceglédi bíbor	7
22. (*)	(b)	Petiole: predominant number of nectaries					
PQ		none or one				Rouget de Sernhac, Mandula kajszí	1
		two or three				Cafona, Magyar kajszí, Veecot	2
		more than three				Canino, Moniquí	3
23.	(b)	Petiole: size of nectaries					
QN		small				Alpha, Yerevani, Bergeron	3
		medium				Tilton, Magyar kajszí	5
		large				Early Biady, Harmat	7
24. (*) (+)	(c)	Flower: diameter					
QN		small				Hâtif Colomer, Borsi rózsa	3
		medium				Reale d'Imola, Magyar kajszí	5
		large				Barese, Harmat	7

Char. No.	Method of Examination	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
25.	(c)	Flower: position of stigma relative to anthers					
QN		below				Canetta	1
		same level				Barese	2
		above				Dr. Mascle	3
26.	(c)	Petal: shape (excluding claw)					
(+)							
PQ		broad elliptic				Boccuccia	1
		circular				Luizet	2
		oblate (transverse elliptic)				Molodoj	3
<p>NZ: "State 3 oblate is a solid shape. Should be a planar shape transverse elliptic." On the contrary regarding TWF/29/3 and TGP14.2 Draft 1 it is a oblate is a planar shape. The situation is the same in the case of Char. 30/31.</p>							
27.	(c)	Petal: color on lower side					
(+)							
PQ		white				Cafona, Polonais	1
		light pink				Magyar kajszi	2
		dark pink				Harcot	3
28.	(c)	Petal: length of claw					
QN		short				Gengary	3
		medium				Early Biady	5
		long				Harmat	7

Char. No.	Method of Examination	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
29. (*)	(d)	Fruit: size					
QN		very small				Haggith, Precoce Gialla, Zard	1
		small				Patriarca Temprano, Hâtif Colomer	3
		medium				Cafona, Canino, Harcot	5
		large				Moniquí, Ceglédi bíbor	7
		very large				Palsteyn, Hargrand, Ceglédi óriás	9
30. (+)	(d)	Fruit: shape in lateral view					
PQ		oblong				Cafona	1
		elliptic				Yerevani	2
		circular				Rouge du Roussillon, Polonais	3
		oblate (transverse elliptic)				Patriarca Temprano	4
		triangular				Luizet	5
		ovate				Canino, Bergeron	6
		obovate				Harcot, Harmat	7
		rhombic				Vulcan	8

ZA: The state 'rhombic' bothers her. This state was inserted because NZ needed it since they have the variety Vulcan which has a rhombic shape in lateral view. Sorry we do not have this variety in our collection. I would be glad if NZ and ZA as well as the shape subgroup could have a harmonised viewpoint in this question.

Char. No.	Method of Examination	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
31.	(d)	Fruit: shape in ventral view					
(+)							
PQ		oblong				Hâtif Colomer, Veecot	1
		elliptic				Flaming Gold, Ambrosia	2
		circular				Rouge du Roussillon, Polonais	3
		oblate (transverse elliptic)					4
		triangular				Reale d'Imola, Luizet	5
		ovate				Canino, Bergeron, Hargrand	6
		obovate				Harcot, Harmat	7
32.	(d)	Fruit: ratio height/ventral width					
(+)							
QN		small				Patriarca Temprano	3
		medium				Rouge du Roussillon, Canino, Peeka	5
		large				Hâtif Colomer, Bergeron	7
33.	(d)	Fruit: ratio lateral width/ventral width					
(+)							
QN		small				Maria Ferez, Mandorlon	3
		medium				Rouge du Roussillon Luizet, Bergeron,	5
		large				Canino, Henderson	7
34.	(d)	Fruit: symmetry in ventral view					
PQ		symmetric				Hâtif Colomer, Polonais, Magyar kajszí	1
		slightly asymmetric				Boccuccia, Royal, Ceglédi óriás	2
		clearly asymmetric				Mammano, Borsi rózsá	3

Char. No.	Method of Examination	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
35. (*)	(d)	Fruit: depth of suture					
QN		shallow				Rouge du Roussillon, Magyar kajszí	3
		medium				Peeka, Pineapple, Ceglédi óriás	5
		deep				Henderson, Dima, Kech-pshar	7
36. (*)	(d)	Fruit: depth of stalk cavity					
QN		shallow				Rouge du Roussillon	3
		medium				Royal	5
		deep				Hâtif Colomer, Palsteyn	7
37. (*) (+)	(d)	Fruit: shape of apex					
PQ		acute				Reale d'Imola	1
		rounded				Luizet, Bergeron	2
		truncate				Hâtif Colomer	3
		retuse				Early Ril	4
38.	(d)	Fruit: presence of mucron					
QL		absent				Blenheim, Magyar kajszí	1
		present				Bhart	9
39. (*)	(d)	Fruit: surface					
QL		smooth				Rouge du Roussillon, Palsteyn, Bergeron	1
		bumpy				Canino, Búlida	2

NZ suggests inserting states weakly bumpy and strongly bumpy. We think it would be to complicate, because this characteristic is changing under the ripening period, and differences are influenced in a greater rate by ripening stage than variety. The original guidelines used only the states: smooth and slightly bumpy.

Char. No.	Method of Examination	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
40.	(d)	Fruit: skin pubescence					
QL		absent				Glattschalige Frühmarille	1
		present				Magyar kajszí, Bergeron	9
41.	(d)	Fruit: glossiness of skin					
QN		absent or weak				Moorpark	1
		moderate				Bergeron	2
		strong				Cluthagold	3
42. (*)	(d)	Fruit: ground color of skin					
PQ		white				Shirazskij belyj	1
		yellowish				Moniquí, Piet Cillié, Yerevani	2
		yellow green				Grüne Spätmarille, Kaisi Ashtarak, Sateni Karmir	3
		light orange				Rouge du Roussillon, Canino, Goldcot	4
		medium orange				Hâtif Colomer, Luizet, Veecot	5
		dark orange				Harogem, Harcot, Bhart	6
43. (*)	(d)	Fruit: amount of over color of skin					
QN		absent or very low				Moniquí, Veecot	1
		low				Cafona, Canino, Sungiant	3
		medium				Hâtif Colomer, Palsteyn, Magyar kajszí	5
		high				Portici, Bergeron, Bhart	7

Char. No.	Method of Examination	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
44.	(d)	Fruit: hue of over color of skin					
PQ		orange red					1
		red					2
		pink					3
		purple					4
45.	(d)	Fruit: intensity of over color of skin					
QN		light				Búlida	3
		medium				Cape Early, Magyar kajsi	5
		dark				Bergeron, Ceglédi bíbor, Bhart	7
46. (*)	(d)	Fruit: color of flesh					
PQ		whitish green				Amban	1
		white				Mouchbah Mourry, Spitak	2
		cream				Moniquí, Malatya, Patriarca Temprano	3
		light orange				Canino, Japan's Early, Yerevani,	4
		medium orange				Rouge du Roussillon, Screara, Harglow	5
		dark orange				Palsteyn, Hâtif Colomer, Harcot	6
47.	(d)	Fruit: texture of flesh					
QN		fine				Peeka	3
		medium				Piet Cillié	5
		coarse				Búlida, Bergeron	7

Char. No.	Method of Examination	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
48.	(d)	Fruit: firmness of flesh					
QN		very soft				Viceroy	1
		soft				Canino, Goldcot	3
		medium				Rouge du Roussillon, Piet Cillié	5
		firm				Palsteyn, Bergeron	7
		very firm				Harogem, Borsi rózsa, Čačansko zlato	9
49.	(d)	Fruit: weight of stone in relation to weight of fruit					
QN		low				De Jouy, Bergeron	3
		medium				Hâtif Colomer, Royal	5
		high				Reale d'Imola	7
50. (*)	(d)	Fruit: adherence of stone to flesh					
QN		absent or very weak				Peeka, Hargrand, Bergeron	1
		weak				Canino, Rouge du Roussillon	3
		medium				Tardif de Bordaneil	5
		strong				Cafona, Precoce di Toscana, Comandor	7

Char. No.	Method of Examination	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
51. (* (+)	(d)	Stone: shape in lateral view					
PQ		oblong				Rouge du Roussillon, Palsteyn, Cibo del Paradiso	1
		elliptic				Precoce di Toscana, Bergeron	2
		circular				Canino, Eten Bey, Hargrand,	3
		ovate				Magyar kajszí, Goldcot	4
		obovate				Harcot, Harmat	5
52.	(d)	Stone: bitterness of dry kernel					
QN		absent or very weak				Reale d'Imola, Bergeron, Harcot	1
		weak				Moniquí, Rouget de Sernhac	3
		medium				Palsteyn	5
		strong				Canino, Hâtif Colomer, Viceroy	7
		very strong				Borsi rózsa	9
53. (* (+)		Time of beginning of flowering					
QN		very early				Setacciara, San Castrese, Harmat	1
		early				Hâtif Colomer, Jaubert- Foulon, Harcot	3
		medium				Cafona, Moniquí, Earle Orange	5
		late				Polonais, Bergeron, Harlayne	7
		very late				Harglow, Skromnyj, Zard	9

Char. No.	Method of Examination	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota	
54.		Time of beginning of fruit ripening						
(*)								
(+)								
QN		very early				Patriarca Temprano, Rutbhart, Samarkandskij rannij	1	
		early				Rouget de Sernhac, Hâtif Colomer, Bhart	3	
		medium				Moniquí, San Castrese, Luizet	5	
		late				Polonais, Bergeron, Harlayne	7	
		very late				Tardif de Bordaneil type 2, Borsi rózsa, Kech- pshar	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) Tree/One-year-old shoot: Unless otherwise stated, all observations on the tree and on the one-year-old shoot should be made during winter, on trees that have fruited at least once.
- (b) Leaf: Unless otherwise stated, all observations on the leaf should be made in summer on fully developed leaves from the middle third of a well developed current season's shoot.
- (c) Flower: Unless otherwise stated, all observations on the flower should be made on fully developed flowers at the beginning of anther dehiscence.
- (d) Fruit/Stone: All observations on the fruit and stone should be made on 25 fruits, five from each of five trees.

8.2 *Explanations for individual characteristics*

Ad. 1: Tree: vigor

The tree vigor should be considered as the overall abundance of vegetative growth.

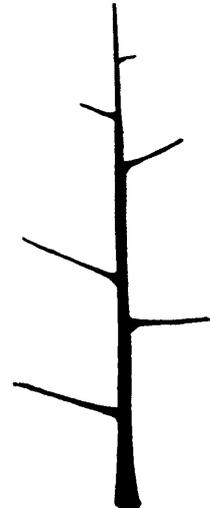
Ad. 2: Tree: habit



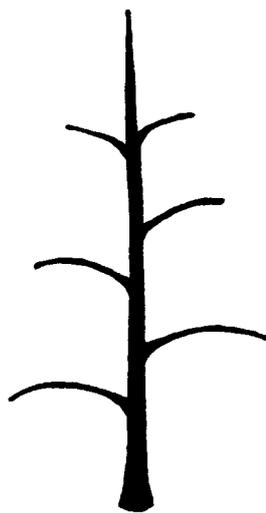
1
fastigate



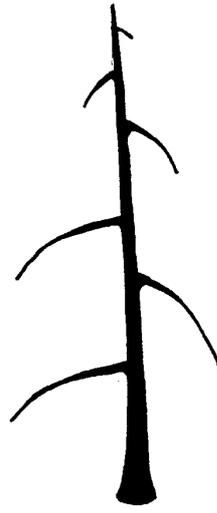
2
upright



3
spreading



4
drooping



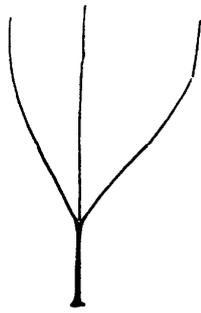
5
weeping

ZA: We accept ZA point of view that tree habit is more than the angle of the branches. We should combine this with the width of the tree. We look forward for plant habit shapes preparing by the term subgroups and will do new drawings till the session in Canada.

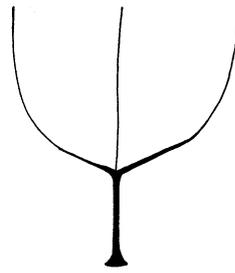
Ad. 6: One-year-old shoot: color on sunny side

Observations should be carried out in the middle of one-year-old primary shoots.

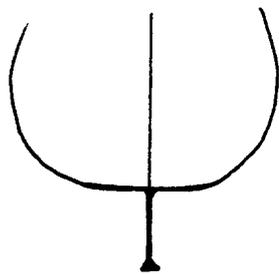
Ad. 12: Leaf blade: shape of base



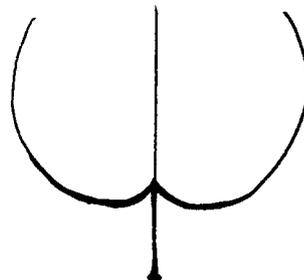
1
acute



2
obtuse

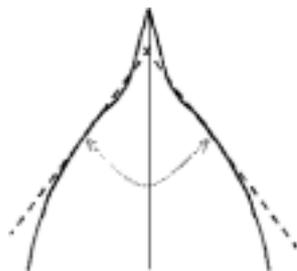


3
truncate

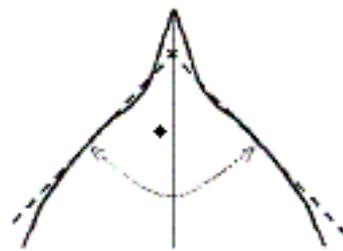


4
cordate

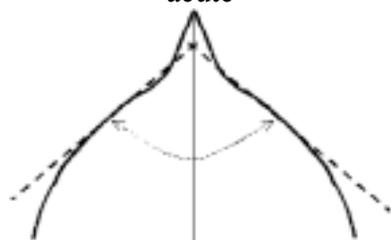
Ad. 13: Leaf blade: angle of apex (excluding tip)



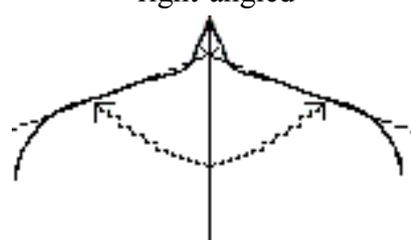
1
acute



2
right-angled

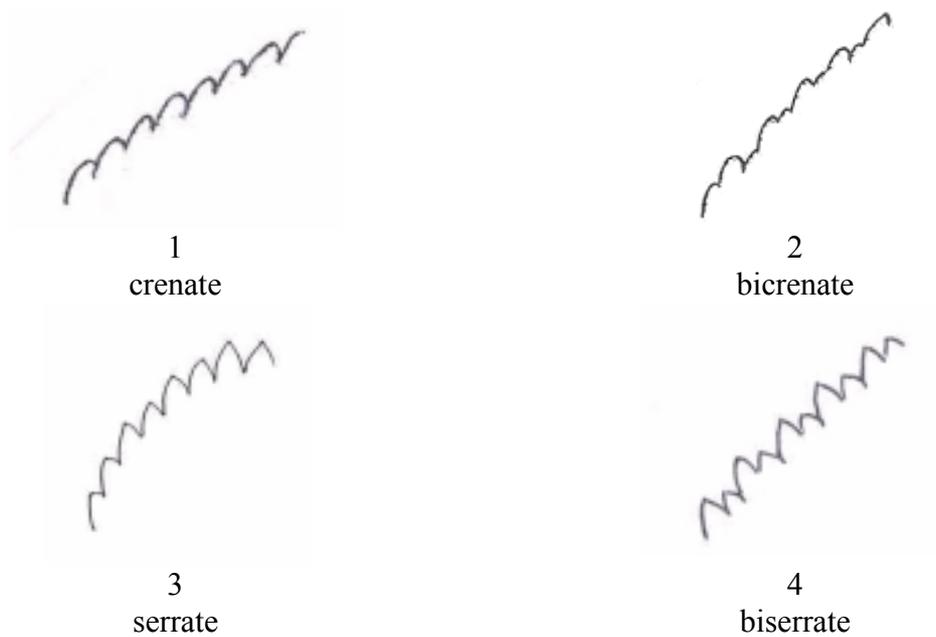


3
moderately obtuse



4
strongly obtuse

Ad. 15: Leaf blade: incisions of margin



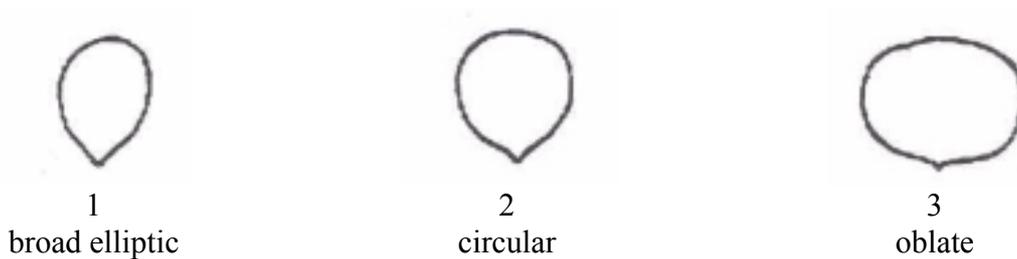
Ad. 17: Leaf blade: profile in cross section

Leaves observed should be on spurs or at base of flowering shoots.

Ad. 24. Flower: diameter

Observations or measurements should be carried out on flowers with petals pressed into horizontal position.

Ad. 26: Petal: shape (excluding claw)



Ad. 27: Petal: color on lower side

Observations should be carried out just after opening of sepals on the lower side.

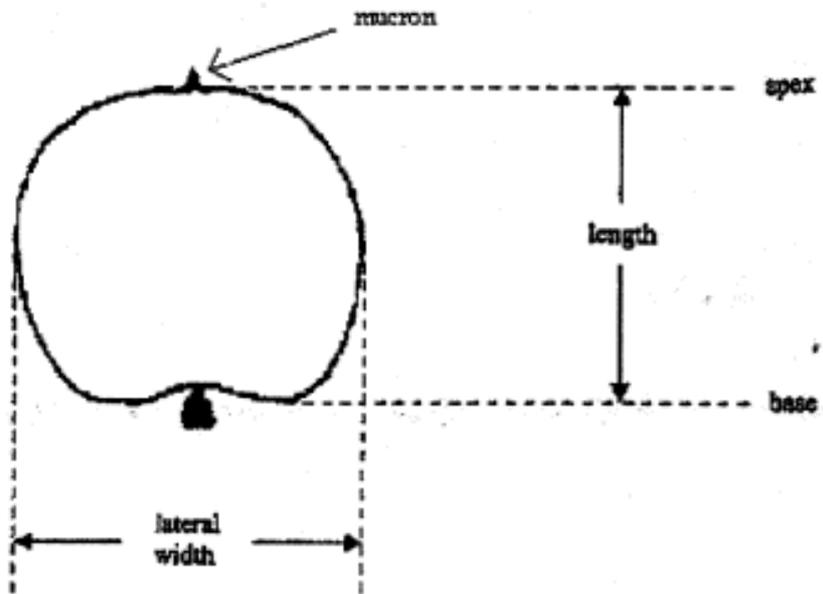
Ad. 30: Fruit: shape in lateral view

Ad. 31: Fruit: shape in ventral view

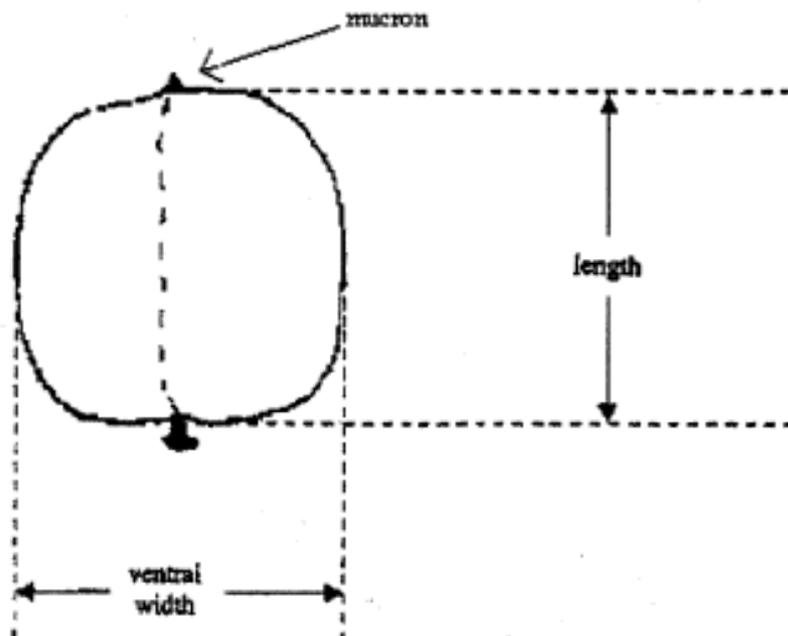
Ad. 32: Fruit: ratio height/ventral width

Ad. 33: Fruit: ratio lateral width/ventral width

Lateral view

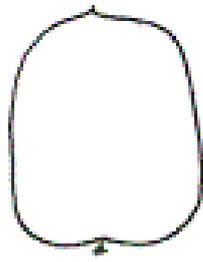


Ventral view

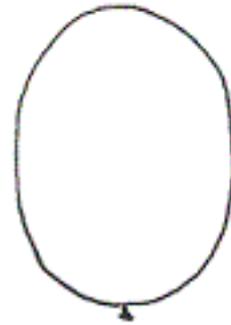


Ad. 30: Fruit: shape in lateral view

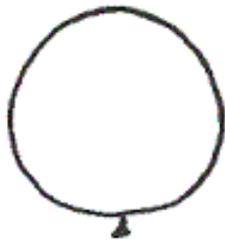
Ad. 31: Fruit: shape in ventral view



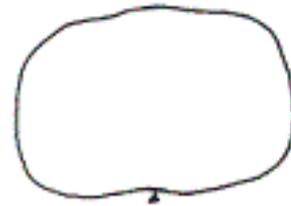
1
oblong



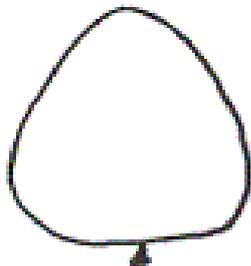
2
elliptic



3
circular



4
oblate



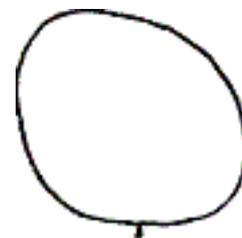
5
triangular



6
ovate



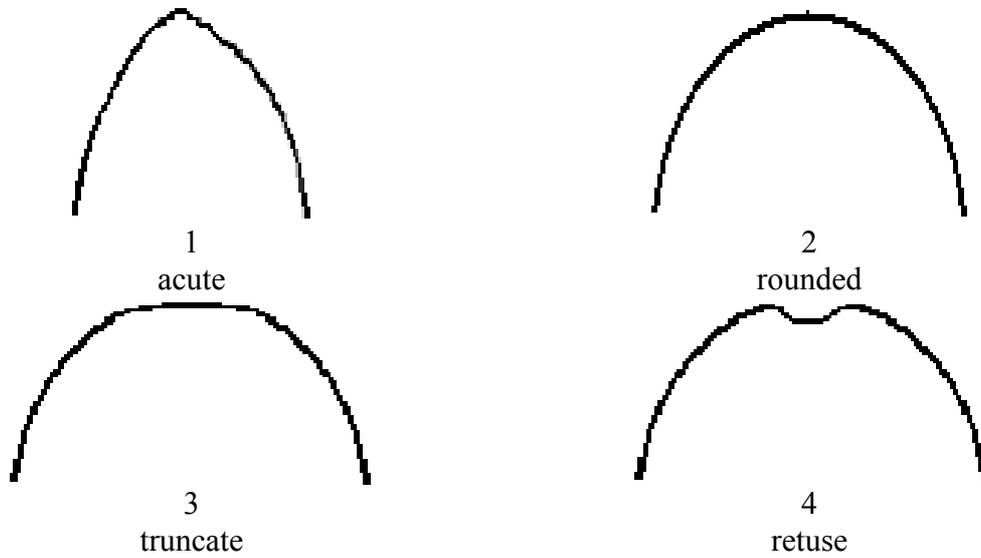
7
obovate



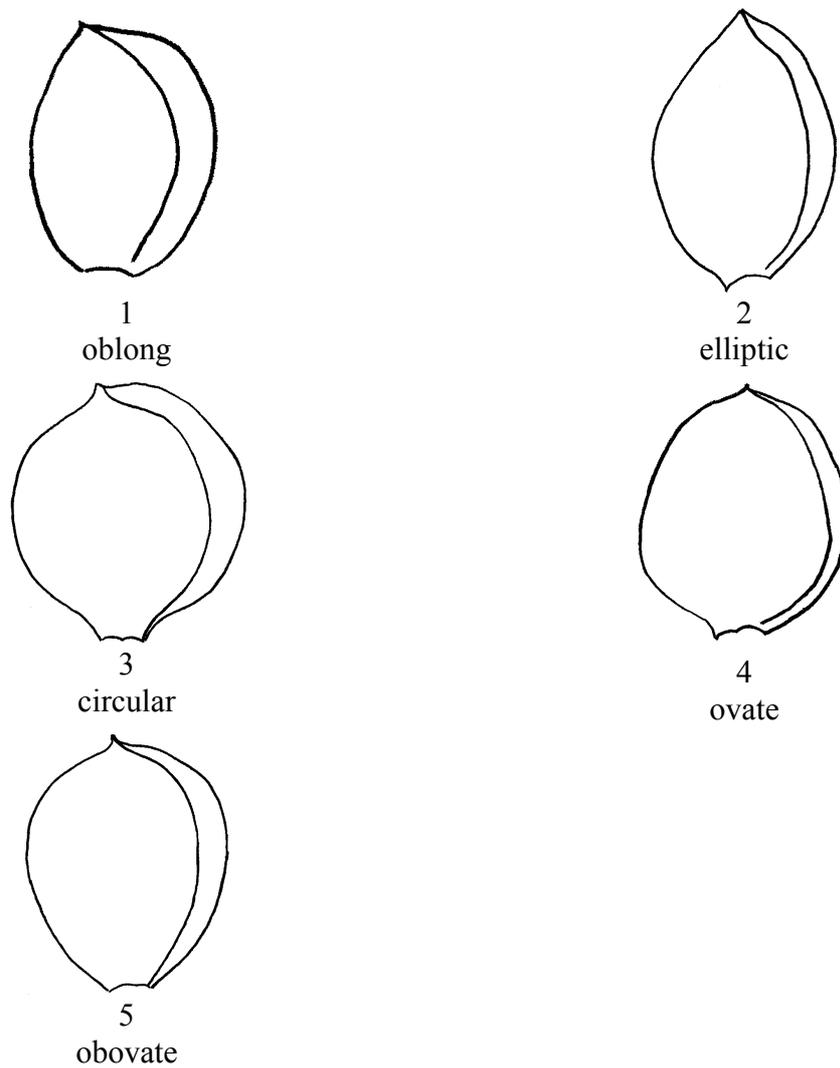
8
rhombic

Ad. 37: Fruit: shape of apex

Observations should be carried out on fruits in lateral cross-section.



Ad. 51: Stone: shape in lateral view



Ad. 53: Time of beginning of flowering

When 5-10% open flowers can be observed.

Ad. 54: Time of beginning of fruit ripening

When 5-10% ripen fruits can be observed. Fruit ripening should be considered as the time of eating ripeness, when the fruit is most easily removed.

Synonym(s) of Example Varieties

Example Varieties	Synonym(s)
Bhart	NJA 32
Borsi rózsza	Kecskemeter rose, Ružova neskora, Trandafirii tirzi
Čačacansko zlato	Čačak's Gold
Earle Orange	Erle Orange, Stark Earli Orange
Magyar kajszai	Hungarian Best, Ungarische Beste, Meilleur d'Hongrie, Klosterneuburger Aprikose, Krasnoshchokij, Velkopavlovická, Mađarska najbolja, Cea mai bună de Ungaria
Pineapple	Ananas-Marille, Abricot d'Ananas, Ananasnyj
Rutbhart	Early Blush
Sateni Karmir	Tabarza
Yerevani	Shalakh

9. Literature

Anonymous, 1997: "The Brooks and Olmo register of new fruit and nut varieties". Third edition, ASHS Press, Alexandria, VA, US.

Agulian, S. L., *et al.*, 1977: "Abrikosy Armenii" "Apricots of Armenia" (bilingual book). Izdatel'stvo Aiastan, Yerevan, AM.

Boček, O., 1954: "Pomologie". Státní Zemědělské Nakladatelství, Praha, CZ.

Beketovskaya, A. A., 1977: „Dima”. Sadovodstvo No.7, p. 28, Moskva, RU.

Bordeianu, T., *et al.*, 1963: "Pomologia Republicii Populare Romîne". Vol. 1-8, Editura Academiei Republicii Populare Romîne, Bucuresti, RO.

Cifranič, P., *et al.*, 1978: "Pomologia". Priroda, Bratislava, SK.

Couranjou, J., 1977: "Variétés d'abricotiers". INVUFLEC, Paris, FR.

Della Strada, G., Pennone, F., Fideghelli, C., Monastra, F., Cobianchi, D., 1989: "Monografia di cultivar di albicocco". Istituto Sperimentale per la Frutticoltura, Roma, IT.

Guerriero, R., 1982: "L'albicocco, (Apricot)" Cultivar. R.E.D.A., Roma, IT.

G. Tóth M., 1997. "Gyümölcsészet (Pomology)" PRIMOM, Nyíregyháza, HU.

Krümmel, H., Groh, W., Friedrich, G., 1964: "Deutsche Obstsorten". Bd. 1-3. Deutscher Landwirtschaftsverlag, Berlin, DE.

Löschnig, J., Passecker, F., 1954: "Die Marille (Aprikose) und ihre Kultur". Österreichischer Agrarverlag, Wien, AT.

Nagano-ken, 1980: "The report on the characterization and classification of apricot varieties," Nagano-ken Fruit Tree Experiment Station (by consignment of the MAFF), JP.

Nyujtó, F., Surányi, D., 1981: "Kajsziarack (Apricot)," Mezőgazdasági Kiadó, Budapest, HU.

Nyujtó, F., Tomcsányi, P., 1959: "A kajsziarack és termesztése (Apricot growing)," Mezőgazdasági Kiadó, Budapest, HU.

Pochyba, D., *et al.*, 1964: "Pomologia," Slov. Vyd. Polnohosp. Lit., Bratislava, SK.

Rayman, J., Tomcsányi, P., 1964: "Gyümölcsfajták zsebkönyve. Almagyümölcsűek és csonthéjasok (Pocket manual of fruit varieties 1.)". Mezőgazdasági Kiadó, Budapest, HU.

Shepelskij, A. I., 1966: "Novye sorta plodovykh i yagodnykh kul'tur Ukrain (New fruit varieties of Ukraine)". Urozhai, Kiev, UA.

Simirenko, L. P., 1963: "Pomologiii". Vol. 1-3. Izd S/h. Lit. Ukr. SSR, Kiev, UA.

Sinskaya, E. N., 1949: "Kulturnaya flora SSSR. XVIII. Plodovye kostochkovye" (Cultivated plants of USSR. Stone fruits)". OGIZ-Sel'khozgiz, Moskva-Leningrad, RU.

Smirnov, V. F., 1972: "Novye sorta kostochkovykh kul'tur, vyvedennye v SSSR (New stone fruit varieties bred in USSR)". Izdatel'stvo Nauka, Moskva, RU.

Smykov, V. K., *et al.*, 1974: "Kostochkovye kul'tury (Stone fruits)". Izdatel'stvo Kartya Moldovenyasko, Kishinev, MD.

Smykov, V. K., *et al.*, 1974: "Kul'tura abrikosa v neoroshayemykh usloviyakh Moldavii (Apricot growing under non-irrigated conditions of Moldavia)". Izdatel'stvo Stiinca, Kishinev, MD.

Stoichkov, J., *et al.*, 1960: "B'lgarska pomologiya (Bulgarian Pomology)". Zemizdat, Sofia, BG.

Tomcsányi, P., *et al.*, 1979: "Gyümölcsfajtáink, Gyakorlati pomológia (Practical Pomology)". Mezőgazdasági Kiadó, Budapest, HU.

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 Latin Name	<input type="text" value="Prunus armeniaca L."/>	
1.2 Common Name	<input type="text" value="APRICOT"/>	
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:
-------------------------	-----------------	-------------------

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) totally unknown cross []

4.1.2 Mutation []
 (please state parent variety)

4.1.3 Discovery []
 (please state where, when and how developed)

4.1.4 Other []
 (please provide details)

4.2 Method of propagating the variety

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 (29) Fruit: size		
very small	Haggith, Precoce Gialla, Zard	[1]
small	Patriarca Temprano, Hâtif Colomer	[3]
medium	Cafona, Canino, Harcot	[5]
large	Moniquí, Ceglédi bíbor	[7]
very large	Palsteyn, Hargrand, Ceglédi óriás	[9]

TECHNICAL QUESTIONNAIRE	Page (x) of {y}	Reference Number:
-------------------------	-----------------	-------------------

Characteristics	Example Varieties	Note
5.2 (42) Fruit: ground color of skin		
white	Shirazskij belyj	[1]
yellowish	Moniquí, Piet Cillié, Yerevani	[2]
yellow green	Grüne Spätmarille, Kaisi Ashtarak, Sateni Karmir	[3]
light orange	Rouge du Roussillon, Canino, Goldcot	[4]
medium orange	Hâtif Colomer, Luizet, Veecot	[5]
dark orange	Harogem, Harcot, Bhart	[6]
5.3 (43) Fruit: amount of over color of skin		
absent or very low	Moniquí, Veecot	1
low	Cafona, Canino, Sungiant	3
medium	Hâtif Colomer, Palsteyn, Magyar kajszí	5
high	Portici, Bergeron, Bhart	7
5.4 (46) Fruit: color of flesh		
whitish green	Amban	[1]
white	Mouchbah Mourry, Spitak	[2]
cream	Moniquí, Malatya, Patriarca Temprano	[3]
light orange	Canino, Japan's Early, Yerevani	[4]
medium orange	Rouge du Roussillon, Screara, Harglow	[5]
dark orange	Palsteyn, Hâtif Colomer, Harcot	[6]

TECHNICAL QUESTIONNAIRE	Page (x) of {y}	Reference Number:
-------------------------	-----------------	-------------------

Characteristics	Example Varieties	Note
5.5 Time of beginning of flowering (53)		
very early	Setacciara, San Castrese, Harmat	[1]
early	Jaubert-Foulon, Hâtif Colomer, Harcot	[3]
medium	Cafona, Moniquí, Earle Orange	[5]
late	Polonais, Bergeron, Harlayne	[7]
very late	Harglow, Skromnyj, Zard	[9]
5.6 Time of beginning of fruit ripening (54)		
very early	Patriarca Temprano, Rutbhart, Samarkandskij rannij	[1]
early	Rouget de Sernhac, Hâtif Colomer, Bhart	[3]
medium	Moniquí, San Castrese, <i>Luizet</i>	[5]
late	<i>Polonais, Bergeron, Harlayne</i>	[7]
very late	Tardif de Bordaneil type 2,	[9]

TECHNICAL QUESTIONNAIRE	Page (x) of {y}	Reference Number:
-------------------------	-----------------	-------------------

6. Similar varieties and differences from these varieties

Please use the table, and space provided for comments, below 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>Fruit: size</i>	<i>small</i>	<i>medium</i>

Comments:

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)

TECHNICAL QUESTIONNAIRE	Page (x) of {y}	Reference Number:
-------------------------	-----------------	-------------------

7.2 Special conditions for the examination of the variety

7.2.1 Are there any special conditions for growing the variety or conducting the examination?

Yes [] No []

7.2.2 If yes, please give details:

7.3 Other information

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

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.

TECHNICAL QUESTIONNAIRE	Page (x) of {y}	Reference Number:
-------------------------	-----------------	-------------------

9. Information on plant material to be examined.

9.1 The expression of a characteristic or several characteristics of a variety may be affected by factors, such as pests and disease, chemical treatment (e.g. growth retardants or pesticides), effects of tissue culture, different rootstocks, scions taken from different growth phases of a tree, etc.

9.2 The plant material should not have undergone any treatment which would affect the expression of the characteristics of the variety, unless the competent authorities allow or request such treatment. If the plant material has undergone such treatment, full details of the treatment must be given. In this respect, please indicate below, to the best of your knowledge, if the plant material to be examined has been subjected to:

- | | | |
|---|---------|--------|
| (a) Microorganisms (e.g. virus, bacteria, phytoplasma) | Yes [] | No [] |
| (b) Chemical treatment (e.g. growth retardant or pesticide) | Yes [] | No [] |
| (c) Tissue culture | Yes [] | No [] |
| (d) Other factors | Yes [] | No [] |

Please provide details of where you have indicated "yes".

.....

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

Applicant's name

Signature

Date

[End of document]