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INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS
GENEVA

**TECHNICAL WORKING PARTY
FOR
FRUIT CROPS**

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WORKING PAPER ON REVISED TEST GUIDELINES FOR APRICOT
(Prunus armeniaca L.)

Document prepared by experts from Italy and Hungary

<u>TABLE OF CONTENTS</u>	<u>PAGE</u>
I. Subject of these Guidelines	3
II. Material Required	3
III. Conduct of Tests	3
IV. Methods and Observations	4
V. Grouping of Varieties	4
VI. Characteristics and Symbols	5
VII. Table of Characteristics	6
VIII. Explanations on the Table of Characteristics	20
IX. Literature	25
X. Technical Questionnaire	27

I. Subject of these Guidelines

These Test Guidelines apply to all vegetatively propagated varieties for fruit production of *Prunus armeniaca* L.

II. Material Required

1. The competent authorities decide when, where and in what quantity and quality the plant material required for testing the variety is to be delivered. Applicants submitting material from a State other than that in which the testing takes place must make sure that all customs formalities are complied with. As a minimum, the following quantity of plant material is recommended:

- 8 trees (one year old grafts)
- or
- 3 budsticks or
- 8 dormant shoots for grafting; sufficient to propagate 8 trees.

It is recommended that the competent authority prescribes either the rootstock peach seedling (preferably GF 305) or apricot seedling or specifies another rootstock. If the applicant intends to use another rootstock he has to ask the competent authority for permission.

2. The plant material supplied should be virus free and visibly healthy, not lacking in vigor or affected by any important pests or diseases. It should preferably not be obtained from *in vitro* propagation.

3. The plant material must not have undergone any treatment unless the competent authorities allow or request such treatment. If it has been treated, full details of the treatment must be given.

III. Conduct of Tests

1. To assess distinctness, it is essential that the trees under test should produce at least two satisfactory crops of fruit.

2. The tests should normally be conducted at one place. If any important characteristics of the variety cannot be seen at that place, the variety may be tested at an additional place.

3. The tests should be carried out under conditions ensuring normal growth. Each test should include a total of 5 trees. Separate plots for observation and for measuring can only be used if they have been subject to similar environmental conditions.

4. Additional tests for special purposes may be established.

IV. Methods and Observations

1. Unless otherwise stated, all observations should be made on 5 plants or parts taken from each of 5 plants. All observations determined by measurement weighing or counting should be made from a minimum sample of 15 typical organs or plant parts, selected from 5 trees, respectively.
2. For 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 should be allowed. If the number of plants is higher than 5 in the time of observation, 5 plants should be chosen by random sampling for testing uniformity. The selected trees should have a permanent marking to ensure so that always the same trees could be tested for uniformity.
3. 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. The length of the internodes should be observed in the middle of the shoot.
4. Unless otherwise stated, all observations on the flower should be made on fully developed flowers at the beginning of anther dehiscence.
5. 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 shoot.
6. Unless otherwise stated, all observations on the fruit should be made on 25 fruits ripened on the 5 trees.
7. Unless otherwise stated, all observations on stones should be made on 25 fresh stones got from the 25 fruits (see point 6) with the exception of bitterness of dry kernel.

V. Grouping of Varieties

1. The collection of varieties to be grown should be divided into groups to facilitate the assessment of distinctness. Characteristics which are suitable for grouping purposes are those which are known from experience not to vary, or to vary only slightly within the variety. Their various states of expression should be fairly evenly distributed throughout the collection.
2. It is recommended that the competent authorities use the following characteristics for grouping varieties:
 - (a) Fruit: size (characteristic 29)
 - (b) Fruit: ground color of skin (characteristic 42)
 - (c) Stone: bitterness of dry kernel (characteristic 49)
 - (d) Time of beginning of flowering (characteristic 50)
 - (e) Time of maturity for consumption (characteristic 51)

VI. Characteristics and Symbols

1. To assess distinctness, uniformity and stability, the characteristics and their states as given in the Table of Characteristics should be used.
2. Notes (numbers), for the purposes of electronic data processing, are given opposite the states of expression for each characteristic.
3. Legend

(*) Characteristics that should be used on all varieties in every growing period over which examinations are made and always be included in the variety descriptions, except when the state of expression of a preceding characteristic or regional environmental conditions render this impossible.

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

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

English	français	deutsch	español	Example Varieties	Note/ Nota
				Examples Beispielssorten Variedades ejemplos	
1. Tree: vigor					
very weak				Sub-zero	1
weak				Polonais, Gengary, Canetta	3
medium				Hatif Colomer, Rouget de Sernhac, Peek, Cacansko zlato, Sun Glo	5
strong				Earle Orange, Palsteyn, Harlayne, Magyar kajszi	7
very strong				Stella, Manchu, Moniqui, Viceroy, Cegledi bibor	9
2. Tree: branching (formerly No. 6)					
weak				Sun Glo	3
medium				Vallegia	5
strong				Prevete	7
3. Tree: habit (+) (formerly No. 2)					
fastigate				Japan's Early	1
upright				Reale d'Imola, Earle Orange	2
spreading				Bulida, Bergeron, Pineapple, Hargrand, Harglow, Magyar kajszi	3
drooping				Palsteyn, Vesna, Polonais	4
weeping					5

English	français	deutsch	español	Example Varieties	Note/ Nota
				Examples Beispielssorten Variedades ejemplo	
4. (*) Tree: predominant distribution of flower buds (formerly No. 3)					
on spurs				Sun Glo, Earle Orange	1
on spurs and on one year old shoots				Hatif Colomer, Canino	2
on one-year old shoots				Prevete, San Castrese, Roxana	3
5. (*) Young shoot: anthocyanin coloration of tip (shoot 10-15 cm long) (former No. 4)					
weak				Alpha, Hargrand, Samarkandski ranni	3
medium				Boccuccia, Veecot	5
strong				Hatif Colomer, Cegledi bibor	7
6. One-year old shoot: size of bud support (formerly No. 5)					
small				Canino	3
medium				Palsteyn	5
large				Hamidi	7
7. Leaf blade: length					
short					3
medium					5
long					7
8. Leaf blade: width					
narrow					3
medium					5
broad					7

	English	français	deutsch	español	Example Varieties	Note/ Nota
					Examples Beispielssorten Variedades ejemplos	
9.	Leaf blade: length/width ratio					
	very low				Canino, Bulida	1
	low				Rouge du Roussillon, Earle Orange, Cafona, Luizet	3
	medium				Hatif Colomer, Rouget de Sernhac, San Castrese, Goldcot	5
	high				Cegledi bibor	7
	very high				Colorado Temprano, Precoce d'Imola	9
10.	Leaf blade: green color of upper side (formerly No. 11)					
	light				Veecot	3
	medium				Cegledi orias	5
	dark				Earle Orange	7
11.	Leaf blade: shape of (+) base (former No. 12)					
	acute				Rouget de Sernhac	1
	obtuse					2
	truncate				Boccuccia	3
	cordate				Bulida	4
12.	Leaf blade: shape of (+) apex (excluding tip)					
	acute				Boccuccia	1
	right-angled				Cegledi orias	2
	obtuse				Moniqui	3
	rounded				Blenheim	4

English	français	deutsch	español	Example Varieties Examples Beispielssorten Variedades ejemplo	Note/ Nota
13. Leaf blade: length of tip					
absent or very short				Alpha	1
short					3
medium					5
long					7
very long					9
14. Leaf blade: incision of margin (former No.15)	(+)				
crenate				Verdun	1
bicrenate				Bulida	2
bluntly serrate					3
bluntly biserrate				Roxana	4
sharply serrate				Boccuccia	5
sharply biserrate				Hamidi	6
15. Leaf blade: undulation of margin (formerly No. 16)					
weak				Palsteyn	3
medium				Royal	5
strong				Piet Cillié	7
16. Leaf blade: angle of cross section (on spurs or at the base of flowering shoots) (formerly No. 17)					
straight				Rouget de Sernhac, Earle Orange	1
slightly concave				Hatif Colomer, Bergeron, Moniqui, Patriarca Temprano	2
strongly concave				Polonais	3

English	français	deutsch	español	Example Varieties	Examples	Note/ Nota
				Beispielssorten	Variedades ejemplar	
17. Petiole: length (*) (formerly No. 18)				Royal, S.Francesco, Rapareddo		3
short				Frater, Cafona		5
medium				Bulida, D'Alessandria, Eten Bey		7
long						
18. Leaf: ratio length of petiole/length of blade (former No. 8)				Moniqui, Patriarca, Temprano		3
low				Hatif Colomer, Rouge du Roussillon		5
medium				Rouget de Sernhac, Earle Orange		7
high						
19. Petiole: thickness						
thin				Pineapple		3
medium				Colomar		5
thick				Bulida		7
20. Petiole: anthocyanin coloration of upper side						
weak						3
medium				Frater		5
strong				Early Biady		7
21. Petiole: predominant (*) number of glands (formerly No. 22)						
zero to one				Rouget de Sernhac		1
two to three				Rouge du Roussillon, Hatif Colomer, Cafona,		2
more than three				Canino, Moniqui		3

	English	français	deutsch	español	Example Varieties Examples Beispielssorten Variedades ejemplo	Note/ Nota
22.	Petiole: size of glands (formerly No. 23)					
	small				Alpha	3
	medium				Tilton	5
	large				Early Biady	7
23.	Flower: size (diameter of (*) flower with petals pressed into horizontal position) (formerly No. 24)					
	small				Hatif Colomer	3
	medium				Reale d'Imola	5
	large				Barese	7
24.	Flower: position of stigma as compared with anthers (formerly No. 25)					
	below				Canetta	1
	same level				Barese	2
	above				Dr. Mascle	3
IL: possible notes 3, 5,7						
25.	Petal: shape (formerly (+) No. 26)					
	trasverse elliptic				Molodoi	1
	circular				Luizet	2
	broad elliptique				Boccuccia	3

	English	français	deutsch	español	Example Varieties	Examples	Note/ Nota
					Beispielssorten	Variedades ejemplo	
26.	Petal: color (just after opening of sepals)						
	white				Cafona		1
	light pink				Magyar kajszi		2
	dark pink				Harcot		3
27.	Petal: length of claw						
	short				Gengary		3
	medium				Early Biady		5
	long						7
28.	Fruit: size						
(*)							
	very small				Haggith, Blanca de Murcia, Precoce Gialla, Millioner,		1
	small				Patriarca Temprano, Hatif Colomer		3
	medium				Moniqui, Earle Orange, Cafona, Canino, Harcot, Bulida, Harglow, Harogem		5
	large				Goldrich, Moniqui		7
	very large				Palsteyn, Hargrand, Cegledi orias		9

English	français	deutsch	español	Example Varieties Examples Beispielssorten Variedades ejemplo	Note/ Nota
29. Fruit: shape in profile view (+)					
round				Rouge du Roussillon	1
triangular				Luizet	2
ovate				Canino	3
obovate				Harcot, Harmat	4
elliptic				Yerevani	5
rectangular				Hatif Colomer, Peekा	6
30. Fruit: shape in frontal view (+)					
round				Rouge du Roussillon, Cafona	1
triangular				Luizet, Reale d'Imola	2
ovate				Canino, Currot, Patriarca Temprano, Hargrand	3
obovate				Harcot, Harmat	4
elliptic				Flaming Gold, Ambrosia	5
rectangular				Peeka, Hatif Colomer, Veecot, Harogem	6
31. Fruit: ratio profile width/ frontal width (+)					
low				Maria Ferez, Mandorlon	3
medium				Luizet, Rouge du Roussillon	5
high				Canino, Henderson	7
32. Fruit: ratio height/frontal width (+)					
low				Patriarca Temprano	3
medium				Rouge du Roussillon, Canino, Peeka	5
high				Hatif Colomer, Royal	7

English	français	deutsch	español	Example Varieties Beispielssorten Variedades ejemplo	Examples	Note/ Nota
33. Fruit: symmetry along suture (formerly No. 34)						
predominantly asymmetric				Boccuccia, Peek-a		1
IL: "predominantly" can be deleted						
34. Fruit: depth of suture (*) (formerly No. 35)						
shallow				Rouge du Roussillon		3
medium				Peeka		5
deep				Henderson		7
35. Fruit: depth of stalk cavity (formerly No. 36)						
shallow				Rouge du Roussillon		3
medium				Royal		5
deep				Hatif Colomer, Palsteyn		7
36. Fruit: shape of apex (*) (formerly No. 37)						
depressed				Early Ril		1
flat				Hatif Colomer		2
rounded				Luizet		3
acute				Reale d'Imola		4
NZ: "emarginate" suggested instead of "depressed"						
37. Fruit: mucron (formerly No. 39)						
absent				Royal		1
present				Cegledi bibor		2

English	français	deutsch	español	Example Varieties	Examples	Note/ Nota
				Beispielssorten	Variedades ejemplos	
38. Fruit: surface (formerly No. 40)						
(*) smooth				Rouge du Roussillon, Palsteyn		1
bumped				Canino, Bulida		2
39. Fruit: skin pubescence (formerly No. 33)						
absent				Glattschalige Fruhmarille		1
present				Magyar kajszi		2
40. Fruit: ground color of skin (formerly No. 41)						
(*) yellow-green				Grune Spatmarille, Kaisi of Ashtarak, Sateni Karmir		1
white				Shirasski belyj		2
cream to yellow				Moniqui, Piet Cillié, Yerevani,		3
light orange				Rouge du Roussillon, Canino, Peek, Khurmai, Goldcot, Mandulakajszi		4
orange				Hatif Colomer, Luizet, Palsteyn, Veecot		5
dark orange				Harogem, Harcot, Bhart		6
41. Fruit: intensity of anthocyanin coloration of skin (formerly No. 42)						
weak				Bulida		3
medium				Cape Early, Magyar kajszi		5
strong				Bergeron, Cegledi bibor		7

	English	français	deutsch	español	Example Varieties Beispielssorten Variedades ejemplo	Examples	Note/ Nota
42.	Fruit: amount of anthocyanin coloration of skin (formerly No. 43)						
	low				Canino		3
	medium				Palsteyn		5
	high				Bergeron		7
43.	Fruit: color of flesh						
(*)	(formerly No. 45)						
	white-green				China n.l, Amban		1
	white						2
	cream				Moniqui, Patriarca Temprano		3
	light orange				Canino, Japan's Early, Khurmai, , Yerevani, Dima		4
	orange				Screara, Cafona, Rouge du Roussillon, Harglow		5
	dark orange				Hatif Colomer, Palsteyn, Veecot Harogem, Harcot		6
44.	Fruit: texture of flesh						
	(formerly No. 46)						
	fine				Peeka		3
	medium				Piet Cillié		5
	coarse				Bulida		7

English	français	deutsch	español	Example Varieties Beispielssorten Variedades ejemplo	Examples	Note/ Nota
45. Fruit: firmness of flesh (formerly No. 47)						
very soft				Viceroy		1
soft				Canino, Goldcot		3
medium				Rouge du Roussillon, Piet Cillié		5
firm				Bergeron, Palsteyn		7
very firm				Oleg Koshevoi, Harogem, Cacansko zlato, Borsi rozsa		9
46. Fruit: stone compared to fruit (by weight) (*) (formerly No. 49)						
low				De Jouy		3
medium				Hatif Colomer, Royal		5
high				Reale d'Imola		7
IL: delete “(by weight)”, since this could also be by size						
47. Fruit: adherence of stone to flesh (*) (formerly 50, 51)						
absent or very weak				Peeka, Hargrand		1
weak				Canino, Rouge du Roussillon		3
medium				Tardif de Bordaneil		5
strong				Cafona, Precoce di Toscana, China n.l		7

		English	français	deutsch	español	Example Varieties	Examples	Note/ Nota
						Beispielssorten	Variedades ejemplo	
48.	Stone: shape in profile							
(*)	view (formerly No. 52)							
		round				Canino, Hargrand, Eten Bey		1
		ovate				Magyar kajszi, Goldcot		2
		obovate				Harcot, Harmat		3
		elliptic				Precoce di Toscano		4
		oblong				Rouge du Roussillon Palsteyn, Cibo del Paradiso		5
49.	Stone: bitterness of dry							
(*)	kernel (formerly No. 53,							
	54)							
		absent or very weak				Bergeron, Cacansko zlato, Harcot, Reale d'Imola		1
		weak				Moniqui, Rouget de Sernhac		3
		medium				Palsteyn		5
		strong				Canino, Hatif Colomer		7
		very strong						9
50.	Time of beginning of							
(*)	flowering (5-10 % open							
	flowers) (formerly No.							
	55)							
		very early				Setacciara, San Castrese		1
		early				Jaubert-Foulon, Hatif Colomer, Morden 604		3
		medium				Cafona, Moniqui, Earle Orange, Goldcot		5
		late				Bergeron, Polonais, S. Francesco, Harlayne		7
		very late				Harglow, Skromnyi, Zard		9

English	français	deutsch	español	Example Varieties Examples Beispielssorten Variedades ejemplos	Note/ Nota
51. Time of maturity for consumption (formerly No. 53)					
(*)					
very early				Patriarca Temprano, Sayeb Ouardi, Samarkandski ranni	1
early				Rouget de Sernhac, Hatif Colomer	3
medium				Canino, Jaubert-Foulon, Cafona, Screara, Hargrand	5
late				Rouge du Roussillon, Polonais, Bergeron, Reale d'Imola, Harlayne	7
very late				Tardif de Bordaneil type 2, Borsi rozsa	9

VIII. Explanations on the Table of Characteristics

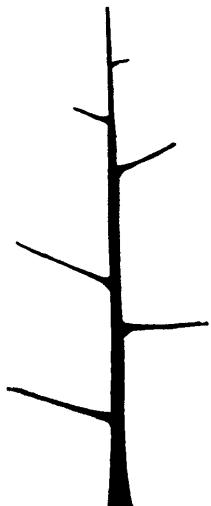
Ad 3. Tree: habit



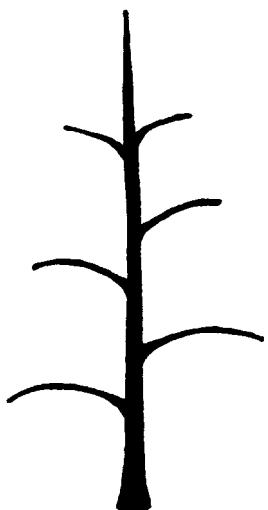
1
fastigiate



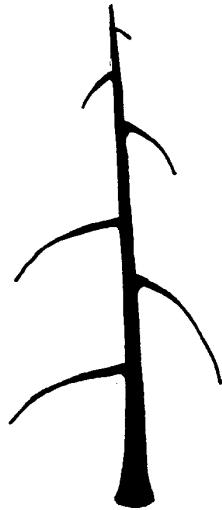
2
upright



3
spreading

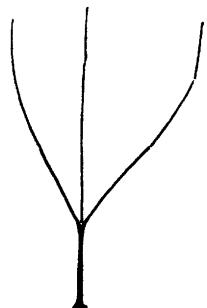


4
drooping

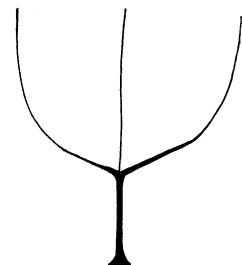


5
weeping

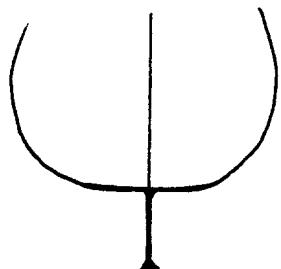
Ad 11. Leaf blade: shape of base



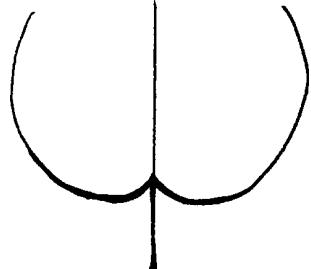
1
acute



2
obtuse

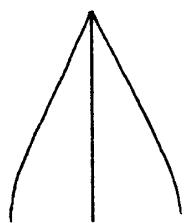


3
truncate

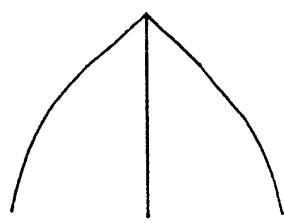


4
cordate

Ad 12. Leaf blade: shape of apex (excluding tip)



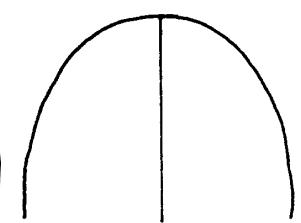
1
acute



2
right-angled

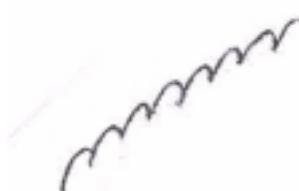


3
obtuse



4
rounded

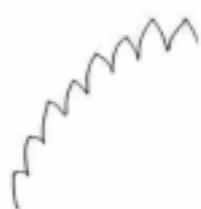
Ad 14. Leaf blade: incisions of margin



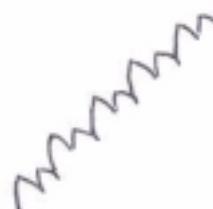
crenate



bicrenate



bluntly serrate



bluntly biserrate

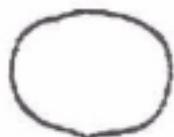


sharply serrate



sharply biserrate

Ad 25. Petal: shape



transverse elliptic



circular



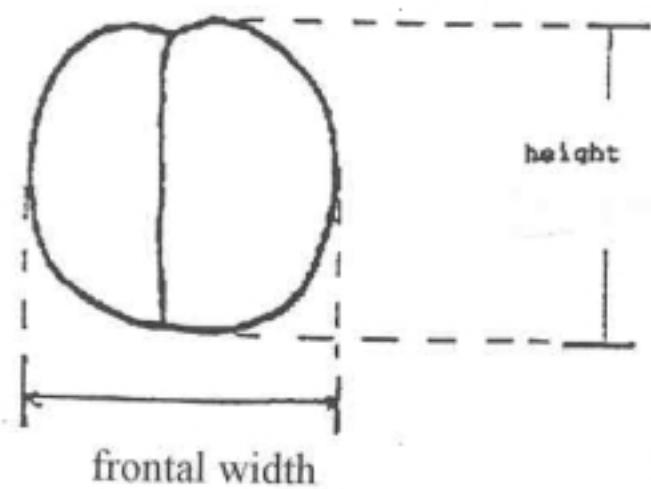
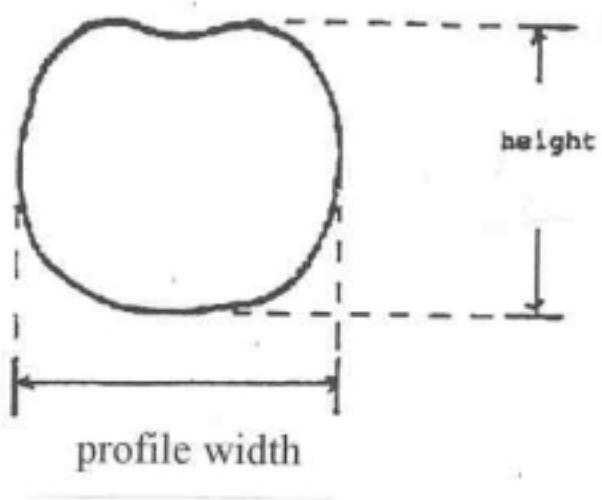
broad elliptic

Ad 29. Fruit: shape in profile view

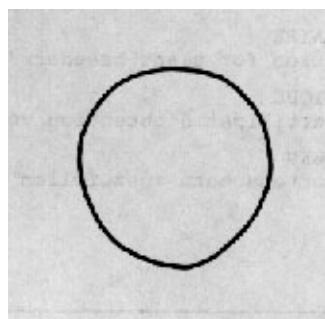
Ad 30. Fruit: shape in frontal view

Ad 31. Fruit: ratio profile width / frontal width

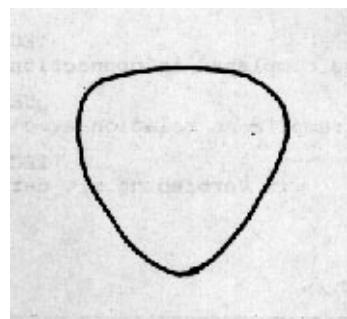
Ad 32. Fruit: ratio height / frontal width



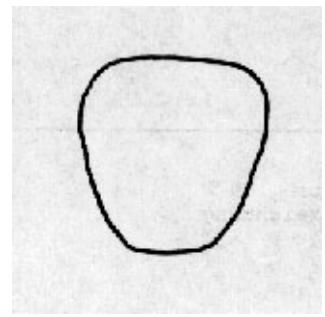
Ad 31. Fruit: shape in frontal view



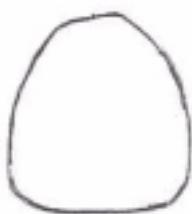
round



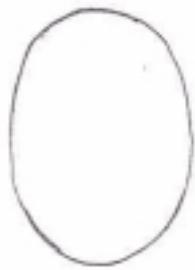
triangular



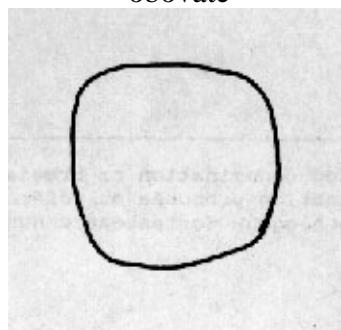
ovate



obovate



elliptic



rectangular

Example Varieties	Synonym(s)
Borsi rozsa	Kecskemeter rose, Ruzova neskora, Trandafiriu tirzii
Cacansko zlato	Cacak's Gold
Earle Orange	Erle Orange, Stark Earli Orange
Magyar kajszi	Hungarian Best, Ungarische Beste, Klosterneuburger Aprikose, Krasnoshchoki, Velkopavlovicka, Madarska najbolja, Cel mai bun de Ungaria
Pineapple	Ananas-Marille, Abricot d'Ananas, Ananasnyj
Sateni Karmir	Tabarza
Yerevani	Shalakh

IX. Literature

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X. Technical Questionnaire

	Reference Number (not to be filled in by the applicant)
TECHNICAL QUESTIONNAIRE to be completed in connection with an application for plant breeders' rights	
1. Species	<i>Prunus armeniaca</i> L. APRICOT (Fruit varieties)
2. Applicant (Name and address)	
3. Proposed denomination or breeder's reference	

4. Information on origin, maintenance and reproduction of the variety

4.1 Origin

(a) Seedling of unknown parentage []

(b) Produced by controlled pollination (indicate parent varieties) []

— Seed bearing parent (indicate parent) []

.....
— Pollen parent (indicate parent) []

.....
(c) Produced by open pollination of (indicate seed bearing parent plant) []

.....
(d) Mutation or sport from (indicate original parent variety) []

.....
(e) Discovery (indicate where and when) []

4.2. *In vitro* propagation:

The plant material of the candidate variety has been obtained
by *in vitro* propagation

yes []
no []

4.3 Virus status:

(a) The variety is free from all known virus as follows (indicate from which viruses) []

.....

(b) The plant material is virus tested (indicate against which virus) []

.....

(c) The virus status is unknown []

4.4 Other information:

5.	Characteristics of the variety to be indicated (the number in brackets refers to the corresponding characteristic in Test Guidelines; please mark the state of expression which best corresponds).		
	Characteristics	Example Varieties	Note
5.1 (28)	Fruit: size		
	very small	Haggith, Blanca de Murcia, Precoce Gialla, Millioner,	1[]
	small	Patriarca Temprano, Hatif Colomer	3[]
	medium	Moniqui, Early Orange, Cafona, Canino Harcot, Bulida, Harglow, Harogem	5[]
	large	Goldrich, Moniqui	7[]
	very large	Palsteyn, Hargrand Cegledi orias	9[]
5.2 (40)	Fruit: ground color of skin		
	yellow-green	Grune Spatmarille, Kaisi of Ashtarak, Sateni Karmir	1[]
	white	Shirasski belyj	2[]
	cream to yellow	Moniqui, Piet Cillié, Yerevani,	3[]
	light orange	Rouge du Roussillon, Canino, Peek, Khurmali, Goldcot, Mandulakajszi	4[]
	orange	Hatif Colomer, Luizet, Palsteyn, Veecot	5[]
	dark orange	Harogem, Harcot, Bhart	6[]

Characteristics	Example Varieties	Note
5.3 Stone: bitterness of dry kernel (49)		
absent or very weak	Bergeron, Cacansko zlato, Harcot, Reale d'Imola	1[]
weak	Moniqui, Rouget de Sernhac	3[]
medium	Palsteyn	5[]
strong	Canino, Hatif Colomer	7[]
very strong		9[]
5.4 Time of beginning of flowering (5-10 % open flowers) (50)		
very early	Setacciara, San Castrese	1[]
early	Jaubert-Foulon, Hatif Colomer, Morden 604	3[]
medium	Cafona, Moniqui, Earle Orange, Goldcot	5[]
late	Bergeron, Polonais, S. Francesco, Harlayne	7[]
very late	Harglow, Skromnyi, Zard	9[]
5.5 Time of maturity for consumption (51)		
very early	Patriarca Temprano, Sayeb, Ouardi, Samarkandski ranni	1[]
early	Rouget de Sernhac, Hatif Colomer	3[]
medium	Canino, Jaubert-Foulon, Cafona, Screeara, Hargrand	5[]
late	Rouge du Roussillon, Polonais, Bergeron, Reale d'Imola, Harlayne	7[]
very late	Tardif de Bordaneil type 2, Borsi rozsa	9[]

6. Similar varieties and differences from these varieties

Denomination of similar variety	Characteristic in which the similar variety is different ^{o)}	State of expression of similar variety	State of expression of candidate variety
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^{o)} In the case of identical states of expressions of both varieties, please indicate the size of the difference.

7. Additional information which may help to distinguish the variety

7.1 Resistance to pests and diseases

7.2 Special conditions for the examination of the variety

7.3 Other information

A representative color photo of the variety should be included in 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 that question is yes, please attach a copy of such an authorization.

[End of document]