



EUROPEAN UNION

COMMUNITY PLANT VARIETY OFFICE

PROTOCOL FOR DISTINCTNESS, UNIFORMITY AND STABILITY TESTS

Prunus armeniaca L., Armeniaca vulgaris Lam.

APRICOT

UPOV Code: PRUNU_ARM

Adopted on 13/03/2008

I SUBJECT OF THE PROTOCOL

The protocol describes the technical procedures to be followed in order to meet the Council Regulation 2100/94 on Community Plant Variety Rights. The technical procedures have been agreed by the Administrative Council and are based on general UPOV Document TG/1/3 and UPOV Guideline TG/70/4 Rev. dated 28/03/2007 for the conduct of tests for Distinctness, Uniformity and Stability. This protocol applies for all varieties of *Prunus armeniaca* L.

II SUBMISSION OF SEED AND OTHER PLANT MATERIAL

1. The Community Plant Variety Office (CPVO) is responsible for informing the applicant of
 - the closing date for the receipt of plant material;
 - the minimum amount and quality of plant material required;
 - the examination office to which material is to be sent.

A sub-sample of the material submitted for test will be held in the variety collection as the definitive sample of the candidate variety.

The applicant is responsible for ensuring compliance with any customs and plant health requirements.

2. Final dates for receipt of documentation and material by the Examination Office

The final dates for receipt of requests, technical questionnaires and the final date or submission period for plant material will be decided by the CPVO and each Examination Office chosen.

The Examination Office is responsible for immediately acknowledging the receipt of requests for testing, and technical questionnaires. Immediately after the closing date for the receipt of plant material the Examination Office should inform the CPVO whether acceptable plant material has been received or not. However if unsatisfactory plant material is submitted the CPVO should be informed as soon as possible.

3. Plant material requirements

The final dates for request for technical examination and sending of Technical Questionnaire by the CPVO as well as submission date, quantity and quality of plant material by the applicant can be found in the S2 supplement of the CPVO Official Gazette and the CPVO website (www.cpvo.europa.eu).

Quality of plants: Should not be less than the standards laid down in Council Directive 2000/29/EC and its amendments concerning quarantine organisms, and Council Directive 92/34/EEC and Commission Directive 93/48/EEC and their amendments concerning organisms impairing quality, at the date of adoption of this protocol; please refer to “Eur-Lex” for the full text and in case of any subsequent amendments to the three aforesaid Directives.

Healthy plant material of the candidate variety should be delivered to the test station in accordance with the requirements outlined in the instructions sent by the CPVO for the submission of plant material, and which can also be consulted in the relevant entries for apricot within the S2 Gazette and the CPVO website. In particular with respect to the phytosanitary requirements, the plant material must be accompanied by a valid certificate from a recognised authority attesting to the fact that the plant material sent for the DUS technical examination has shown negative laboratory test results for the list of pests and pathogens outlined in the pertinent entry of the examination office in the S2 Gazette/CPVO website, where the candidate apricot variety is to undergo its DUS technical examination.

Chemical treatment: The plant material must not have undergone any treatment unless the CPVO and the examination office allow or request such treatment. If it has been treated, full details of the treatment must be given.

Labelling of individual plants in sample:

- Species
- File number of the application allocated by the CPVO
- Breeder's reference
- Examination office's reference (if known)
- Name of applicant
- The phrase “On request of the CPVO”

III CONDUCT OF TESTS

1. Variety collection

A variety collection will be maintained for the purpose of establishing distinctness of the candidate varieties in test. A variety collection may contain both living material and descriptive information. A variety will be included in a variety collection only if plant material is available to make a technical examination.

Pursuant to Article 7 of Council Regulation No. 2100/94, the basis for a collection should be the following:

- varieties listed or protected at the EU level or at least in one of the EEA Member States;
- varieties protected in other UPOV Member States;
- any other variety in common knowledge.

The composition of the variety collection in each Examination Office depends on the environmental conditions in which the Examination Office is located.

Variety collections will be held under conditions which ensure the long term maintenance of each accession. It is the responsibility of Examination Offices to replace reference material which has deteriorated or become depleted. Replacement material can only be introduced if appropriate tests confirm conformity with the existing reference material. If any difficulties arise for the replacement of reference material, Examination Offices must inform the CPVO. If authentic plant material of a variety cannot be supplied to an Examination Office the variety will be removed from the variety collection.

2. Material to be examined

Candidate varieties will be directly compared with other candidates for Community plant variety rights tested at the same Examination Office, and with appropriate varieties in the variety collection. When necessary an Examination Office may also include other candidates and varieties. Examination Offices should therefore make efforts to co-ordinate the work with other Offices involved in DUS testing of apricot. There should be at least an exchange of technical questionnaires for each candidate variety, and during the test period, Examination Offices should notify each other and the CPVO of candidate varieties which are likely to present problems in establishing distinctness. In order to solve particular problems Examination Offices may exchange plant material.

3. Characteristics to be used

The characteristics to be used in DUS tests and preparation of descriptions shall be those referred to in the Annex 1. All the characteristics shall be used, providing that observation of a characteristic is not rendered impossible by the expression of any other characteristic, or the expression of a characteristic is prevented by the environmental conditions under which the test is conducted. In the latter case, the CPVO should be informed. In addition the existence of some other regulation e.g. plant health, may make the observation of the characteristic impossible.

The Administrative Council empowers the President, in accordance with Article 23 of Commission Regulation N° 1239/95, to insert additional characteristics and their expression in respect of a variety.

4. Grouping of varieties

The varieties and candidates to be compared will 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 a variety and which in their various states of expression are fairly evenly distributed throughout the collection. In the case of continuous grouping characteristics overlapping states of expression between adjacent groups is required to reduce the risks of incorrect allocation of candidates to groups. The characters used for grouping could be the following:

- a) Fruit : size (characteristic 28)
- b) Fruit : ground colour (characteristic 44)
- c) Fruit: relative area of over colour (characteristic 45)
- d) Fruit: colour of flesh (characteristic 49)
- e) Time of beginning of flowering (characteristic 56)
- f) Time of beginning of fruit ripening (characteristic 57)

5. Trial designs and growing conditions

The minimum duration of tests (independent growing cycles) will normally include at least two satisfactory crops of fruit. Tests will be carried out under conditions ensuring normal growth. The size of the plots will be such that plants or parts of plants may be removed for measuring and counting without prejudice to the observations which must be made up to the end of the growing period.

The test design is as follows

Each test should include 5 plants.

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.

6. Special tests

In accordance with Article 83(3) of Council Regulation No. 2100/94 an applicant may claim either in the Technical Questionnaire or during the test that a candidate has a characteristic which would be helpful in establishing distinctness. If such a claim is made and is supported by reliable technical data, a special test may be undertaken providing that a technically acceptable test procedure can be devised.

Special tests will be undertaken, with the agreement of the President of CPVO, where distinctness is unlikely to be shown using the characters listed in the protocol.

7. Standards for decisions

a) **Distinctness**

A candidate variety will be considered to be distinct if it meets the requirements of Article 7 of Council Regulation No. 2100/94.

b) **Uniformity**

A candidate will be considered to be sufficiently uniform if the number of off-types does not exceed the number of plants as indicated in the table below. A population standard of 1% and an acceptance probability of 95% should be applied.

Table of maximum numbers of off-types allowed for uniformity standards.

<u>Number of plants</u>	<u>off-types allowed</u>
≤ 5	0

c) **Stability**

A candidate will be considered to be sufficiently stable when there is no evidence to indicate that it lacks uniformity.

IV REPORTING OF RESULTS

After each recording season the results will be summarised and reported to the CPVO in the form of a UPOV model interim report in which any problems will be indicated under the headings distinctness, uniformity and stability. Candidates may meet the DUS standards after two fruiting periods but in some cases three fruiting periods may be required. When tests are completed the results will be sent by the Examination Office to the CPVO in the form of a UPOV model final report.

If it is considered that the candidate complies with the DUS standards, the final report will be accompanied by a variety description in the format recommended by UPOV. If not, the reasons for failure and a summary of the test results will be included with the final report. The variety description should be supplemented by:

- (i) a colour photograph of 2 typical leaves
- (ii) a colour photograph of 5 typical longitudinally sliced fruits

The CPVO must receive interim reports and final reports by the date agreed between the CPVO and the examination office.

Interim reports and final examination reports shall be signed by the responsible member of the staff of the Examination Office and shall expressly acknowledge the exclusive rights of disposal of CPVO.

V LIAISON WITH THE APPLICANT

If problems arise during the course of the test the CPVO should be informed immediately so that the information can be passed on to the applicant. Subject to prior agreement, the applicant may be directly informed at the same time as the CPVO particularly if a visit to the trial is advisable.

The interim report as well as the final report shall be sent by the Examination Office to the CPVO.

ANNEXES TO FOLLOW

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ANNEX II

Technical Questionnaire

ANNEX I

TABLE OF CHARACTERISTICS TO BE USED IN DUS-TEST AND PREPARATION OF DESCRIPTIONS

CPVO N°	UPOV N°	Stage, method	Characteristics	Examples	Note
1.	1.		Tree: vigour		
(+)	(+)	(a)	very weak	Sub-zero	1
QN	QN		weak	Ninfa, Polonais	3
			medium	Bergeron, Canino, Peeka, Rouge du Roussillon	5
			strong	Earle Orange, Magyar Kajszi, Palsteyn, Pisana, Portici	7
			very strong	Ceglédi Bíbor, Monaco Bello, Moniquí, Viceroy	9
2.	2.		Tree: habit		
(+)	(+)	(a)	fastigate	Japan's Early	1
PQ	PQ		upright	Harcot, Reale d'Imola	2
			upright to spreading	Ceglédi Óriás, Proimo Tyrinthos, Veecot	3
			spreading	Blenheim, Canino, Hargrand, Magyar Kajszi	4
			drooping	Palsteyn, Pisana, Polonais, Vesna	5
			weeping		6
3.	3.		Tree: degree of branching		
(+)	(+)	(a)	weak	Earle Orange, Roxana	3
QN	QN		medium	Bergeron, Magyar Kajszi, San Castrese	5
			strong	Harlayne, Prevette, Veecot	7
4.	4.		Tree: distribution of flower buds		
PQ	PQ	(a)	predominantly on spurs	Earle Orange, Nugget, Sun Glo	1
			equally on spurs and on one-year-old shoots	Bergeron, Canino, San Castrese, Veecot	2
			predominantly on one-year-old shoots	Amal, Ouardi, Roxana	3

CPVO N°	UPOV N°	Stage, method	Characteristics	Examples	Note
5.	5.		Young shoot: anthocyanin coloration of apex (during rapid growth)		
QN	QN		weak	Blenheim, Hargrand, Perla, Samarkandskij Rannij	3
			medium	Polonais, San Castrese, Sun Glo	5
			strong	Ceglédi Bíbor, Harcot, Ohaicos, Roxana	7
6.	6.		One-year-old shoot: colour on sunny side		
(+)	(+)	(a)	yellow brown	Bebeco, Grandir	1
PQ	PQ		red brown	Palsteyn, Polonais, Veecot	2
			purple brown	Blenheim, Harcot	3
7.	7.		One-year-old shoot: size of bud support		
QN	QN	(a)	small	Canino, Harcot, Vitillo	3
			medium	Hargrand, Magyar Kajszi, Palsteyn, Portici	5
			large	Ceglédi Arany, Hamidi, Roxana	7
8.	8.		Leaf blade: length		
QN	QN	(b)	short	Early Biady, Perla, Samarkandskij Rannij	3
			medium	Canino, Portici, Rouge du Roussillon, Veecot	5
			long	A. Vecchioni, Ceglédi Arany, Moniquí, Roxana	7
9.	9.		Leaf blade: width		
QN	QN	(b)	narrow	Ceglédi Bíbor, Monaco Bello, Rouget de Sernhac, Veecot	3
			medium	Canino, Harcot, Vitillo	5
			broad	Ceglédi Piroska, Moniquí, Pisana	7

CPVO N°	UPOV N°	Stage, method	Characteristics	Examples	Note
10.	10.		Leaf blade: ratio length/width		
QN	QN	(b)	very small	Canino, Portici	1
			small	Cafona, Hargrand	3
			medium	Harcot, San Castrese	5
			large	A. Vecchioni, Ceglédi Bíbor, Rouget de Sernhac	7
			very large	Colorado Temprano, Noemi	9
11.	11.		Leaf blade: intensity of green colour of upper side		
QN	QN	(b)	light	San Castrese, Veecot, Velasquez	3
			medium	Canino, Ceglédi Óriás, Flaming Gold, Harcot	5
			dark	A. Vecchioni, Earle Orange, Moniquí	7
12.	12.		Leaf blade: shape of base		
(+)	(+)		acute	Ceglédi Bíbor, Rouget de Sernhac, San Francesco	1
PQ	PQ	(b)	obtuse	Bhart, Magyar kajszi, Portici	2
			truncate	Bergeron, Blenheim, Canino, Perla	3
			cordate	Moniquí	4
13.	13.		Leaf blade: angle of apex (excluding tip)		
(+)	(+)		acute	San Castrese	1
PQ	PQ	(b)	right-angled	Canino, Ceglédi Óriás	2
			moderately obtuse	Bergeron, Polonais, Portici	3
			strongly obtuse	Hargrand, Moniquí	4
14.	14.		Leaf blade: length of tip		
QN	QN	(b)	absent or very short	Alpha	1
			short	Bhart, Harmat, Moniquí	3
			medium	Magyar Kajszi	5
			long	Ivonne Liverani, Roxana	7

CPVO N°	UPOV N°	Stage, method	Characteristics	Examples	Note
15.	15.		Leaf blade: incisions of margin		
(+)	(+)		crenate	Canino, San Castrese, Verdun	1
PQ	PQ	(b)	bicrenate	Bhart, Ninfa	2
			serrate	Vitillo	3
			biserrate	Hamidi, Rakovszky, San Francesco	4
16.	16.		Leaf blade: undulation of margin		
QN	QN	(b)	weak	Harcot, Palsteyn, Portici	3
			medium	Blenheim, Nonno, Roxana	5
			strong	Piet Cillié, Polonais, San Francesco	7
17.	17.		Leaf blade: profile in cross section		
(+)	(+)		straight or weakly concave	Bergeron, Earle Orange, Rouget de Sernhac, San Castrese	1
QN	QN	(b)	moderately concave	Dulcinea, Moniquí	2
			strongly concave	Polonais	3
18.	18.		Petiole: length		
	(*)		short	Moniquí, Ninfa, Veecot	3
QN	QN	(b)	medium	Bergeron, Cafona, Canino, Hargrand	5
			long	Reale d'Imola, Skopska Krupna	7
19.	19.		Leaf: ratio length of blade/length of petiole		
QN	QN	(b)	small	Earle Orange, Harcot, Pisana, Rouget de Sernhac	3
			medium	Bergeron, Hâtif Colomer, Portici, Rouge du Roussillon	5
			large	Bebeco, Flaming Gold, Monaco Bello, Moniquí	7

CPVO N°	UPOV N°	Stage, method	Characteristics	Examples	Note
20.	20.		Petiole: thickness		
QN	QN	(b)	thin	San Castrese, Flaming Gold, Veecot	3
			medium	Harcot, Portici	5
			thick	Ceglédi Arany Moniquí, Reale d'Imola	7
21.	21.		Petiole: anthocyanin coloration of upper side		
QN	QN	(b)	weak	Cibo del Paradiso	3
			medium	Bebeco, Bhart, San Castrese	5
			strong	Canino, Ceglédi Bíbor, Early Biady, Harogem	7
22.	22.		Petiole: predominant number of nectaries		
		(*)	none or one	Mandulakajszai, Rouget de Sernhac, Sant' Ambrogio	1
QN	QN	(b)	two or three	Cafona, Magyar kajszai, Veecot	2
			more than three	Canino, Moniquí, Pisana	3
23.	23.		Petiole: size of nectaries		
QN	QN	(b)	small	Alpha, San Francesco, Yerevani	3
			medium	Ceglédi Óriás, San Castrese, Tilton	5
			large	Canino, Early Biady, Harmat, Pisana	7
24.	24.		Flower: diameter		
(+)	(+)		small	Borsi Rózsa, Hâtif Colomer, Portici	3
	(*)		medium	Magyar Kajszai, Polonais, Reale d'Imola	5
QN	QN	(c)	large	Hargrand, Harmat, San Castrese	7

CPVO N°	UPOV N°	Stage, method	Characteristics	Examples	Note
25.	25.		Flower: position of stigma relative to anthers		
QN	QN	(c)	below	Cannetta, Harmat	1
			same level	Hargrand, Portici	2
			above	Canino, Pisana, Polonais	3
26.	26.		Petal: shape (excluding claw)		
(+)	(+)		broad elliptic	Sant' Ambrogio	1
PQ	PQ	(c)	circular	Harcot, Luizet	2
			oblate	Canino, Polonais, Vitillo	3
27.	27.		Petal: colour on lower side		
(+)	(+)		white	Cafona, Polonais	1
PQ	PQ	(c)	light pink	Magyar Kajszi, San Castrese	2
			dark pink	Harcot	3
28.	28.		Fruit: size		
	(*)		very small	Haggith, Menace, Zard	1
QN	QN	(d)	small	Borsi Rózsa, Hâtif Colomer, Patriarca Temprano	3
			medium	Cafona, Canino, Harcot	5
			large	Ceglédi Bibor, Moniquí, Portici	7
G			very large	Ceglédi Óriàs, Hargrand, Palsteyn, Pisana	9

CPVO N°	UPOV N°	Stage, method	Characteristics	Examples	Note
29.	29.		Fruit: shape in lateral view		
(+)	(+)		triangular	Luizet	1
PQ	PQ	(d)	ovate	Bergeron, Pisana	2
			oblong	Blenheim, Portici, Sundrop	3
			elliptic	Precoce d'Imola, Wenatchee, Yerevani	4
			circular	Earle Orange, Ninfa, Ouardi, Polonais	5
			oblate	Korai Zamos, Nugget, Patriarca, Temprano	6
			obovate	Harcot, Harmat, Trevatt	7
			oblique rhombic	Canino, Vulcan	8
30.	30.		Fruit: shape in ventral view		
(+)	(+)		triangular	Luizet, Mandulakajsi, Reale d'Imola	1
PQ	PQ	(d)	ovate	Bergeron, Canino, Fracasso	2
			oblong	Baracca, Hargrand, Hâtif Colomer, Veecot	3
			elliptic	Bella d'Imola, Flaming Gold, Sant' Ambrogio, Yerevani	4
			circular	Rouge du Roussillon, Polonais, San Castrese, Viceroy	5
			oblate	Nugget	6
			obovate	Harcot, Harmat, Portici	7
31.	31.		Fruit: height		
(+)	(+)		short	Patriarca Temprano, Sayeb, Samarkandskij Rannij	3
QN	QN	(d)	medium	Bebeco, Bergeron, Canino, Polonais	5
			tall	Goldrich, Mandulakajsi, Vitillo	7

CPVO N°	UPOV N°	Stage, method	Characteristics	Examples	Note
32.	32.		Fruit: lateral width		
(+)	(+)		narrow	Cerasiello, Harmat, Samarkandskij Rannij	3
QN	QN	(d)	medium	Bergeron, Bhart, Cafona	5
			broad	Hargrand, Moniquí, Vitillo	7
33.	33.		Fruit: ventral width		
(+)	(+)		narrow	Cerasiello, Harlayne, Hâtif Colomer	3
QN	QN	(d)	medium	Bebeco, Bhart, Palummella	5
			broad	Ceglédi Arany, Goldrich, Moniquí	7
34.	34.		Fruit: ratio height/ventral width		
(+)	(+)		small	Korai Zamatós, Monaco Bello, Patriarca Temprano	3
QN	QN	(d)	medium	Cafona, Canino, Magyar Kajszi, Rouge du Roussillon	5
			large	Bergeron, Hâtif Colomer, Vitillo	7
35.	35.		Fruit: ratio lateral width/ventral width		
(+)	(+)		small	Mandorlon, Maria Ferez, Vesna	3
QN	QN	(d)	medium	Bergeron, Luizet, Pisana, Rouge du Roussillon	5
			large	Borsi Rózsa, Henderson	7
36.	36.		Fruit: symmetry in ventral view		
PQ	PQ	(d)	symmetric	Canino, Hâtif Colomer, Magyar Kajszi, Polonais, Portici	1
			slightly asymmetric	Boccucia, Ceglédi Órias, Royal	2
			clearly asymmetric	Borsi Rózsa, Reale d'Imola	3

CPVO N°	UPOV N°	Stage, method	Characteristics	Examples	Note
37.	37.		Fruit: suture		
PQ	PQ	(d)	raised	Priboto	1
			slightly sunken	Magyar Kajszai, Ninfa, Rouge du Roussillon	2
			moderately sunken	Bergeron, Monaco Bello, Pineapple	3
			deeply sunken	Dima, Henderson, Kechpshar, Portici	4
38.	38.		Fruit: depth of stalk cavity		
QN	QN	(d)	shallow	Harlayne, Rouge du Roussillon, San Castrese	3
			medium	Blenheim, Magyar Kajszai, Vitillo	5
			deep	Canino, Ceglédi Óriás, Hâtif Colomer, Palsteyn	7
39.	39.		Fruit: shape of apex		
(+)	(+)		acute	Mandulakajszai, Reale d'Imola	1
PQ	PQ	(d)	rounded	Bergeron, Goldrich, Luizet, Portici	2
			truncate	Bella d'Imola, Hargrand, Hâtif Colomer	3
			retuse	Early Ril, Perfection, San Castrese	4
40.	40.		Fruit: presence of mucron		
(+)	(+)		absent	Blenheim, Canino, San Castrese	1
QL		(d)	present	Bhart, Pisana	9
41.	41.		Fruit: surface		
QL	QL	(d)	smooth	Bergeron, Palsteyn, Portici, Rouge du Roussillon	1
			bumpy	Canino, Ceglédi Óriás, Nonno	2
42.	42.		Fruit: skin pubescence		
QL	QL	(d)	absent	Glattschalige Frühmarille	1
			present	Bergeron, Canino, Magyar Kajszai	9

CPVO N°	UPOV N°	Stage, method	Characteristics	Examples	Note
43.	43.		<u>Only varieties without pubescence:</u> Fruit: glossiness of skin		
QN		(d)	absent or weak	Moorpark	1
			medium	Harcot	2
			strong	Cluthagold, Sun Glo	3
44.	44.		Fruit: ground colour of skin		
		(*)	not visible	A3759, A3844	1
PQ	PQ	(d)	white	San Nicola, Shirazskij Belyj	2
			yellowish	Moniquí, Piet Cillié, Vitillo, Yerevani	3
			yellow green	Grüne Spätmarille, Kaisi Ashtarak, Sateni Karmir	4
			light orange	Canino, Goldcot, Hargrand, Portici, Rouge du Roussillon	5
			medium orange	Hâtif Colomer, Luizet, Pisana, Veecot	6
G			dark orange	Bhart, Harcot, Harogem	7
45.	45.		Fruit: relative area of over colour		
		(*)	absent or very small	Maria Matilde, Moniquí, Yerevani	1
QN	QN	(d)	small	Cafona, Canino, Goldrich	3
			medium	Hâtif Colomer, Magyar Kajszi, Palsteyn, Portici	5
			large	Bergeron, Bhart, Pisana	7
G			very large	A3759, A3844	9
46.	46.		Fruit: hue of over colour		
PQ	PQ	(d)	orange red		1
			red		2
			pink		3
			purple		4

CPVO N°	UPOV N°	Stage, method	Characteristics	Examples	Note
47.	47.		Fruit: intensity of over colour		
QN	QN	(d)	light		3
			medium		5
			dark		7
48.	48		Fruit: pattern of over colour		
PQ	PQ	(d)	isolated flecks (spots)	Rouge du Roussillon	1
			solid flush	Bergeron	2
			covered all over with very small dots	Moniquí	3
49.	49.		Fruit: colour of flesh		
	(*)		whitish green	Amban	1
PQ	PQ	(d)	white	Cibo del Paradiso, Mouchbah Mourry, Spitak	2
			cream	Barese, Malatya, Moniquí, Patriarca Temprano	3
			light orange	Canino, Harmat, San Castrese, Yerevani	4
			medium orange	Harglow, Pisana, Rouge du Roussillon, Screara	5
G			dark orange	Francese, Harcot, Hâtif Colomer, Palsteyn	6
50.	50.		Fruit: texture of flesh		
QN	QN	(d)	fine	Fracasso, Harlayne, Peeka	1
			medium	Canino, Magyar Kajszi, Piet Cillié	2
			coarse	Bergeron, Precoce d'Imola	3

CPVO N°	UPOV N°	Stage, method	Characteristics	Examples	Note
51.	51.		Fruit: firmness of flesh		
QN	QN	(d)	very soft	Sant' Ambrogio, Viceroy	1
			soft	Alessandrino, Goldcot	3
			medium	Magyar Kajszi, Piet Cillié, Rouge du Roussillon, San Castrese	5
			firm	Bella d'Imola, Bergeron, Palsteyn	7
			very firm	Boccuccia Liscia, Borsi Rózsa, Čačansko Zlato, Harogem	9
52.	52.		Fruit: ratio weight of fruit/weight of stone		
QN	QN	(d)	small	Borsi Rózsa, Reale d'Imola	3
			medium	Blenheim, Hâtif Colomer, Portici	5
			large	Badami, San Castrese	7
53.	53.		Fruit: adherence of stone to flesh		
	(*)		absent or very weak	Bergeron, Hargrand, Ninfa, Peeka	1
QN	QN	(d)	weak	Canino, Nonno, Rouge du Roussillon, Sirena	3
			medium	Cafona, Tardif de Bordaneil	5
			strong	Commandor, Precoce di Toscana	7
54.	54.		Stone: shape in lateral view		
(+)	(+)		ovate	Goldcot, Magyar Kajszi, Portici	1
	(*)		oblong	Bella d'Imola, Palsteyn, Rouge du Roussillon	2
PQ	PQ	(d)	elliptic	Bergeron, Vitillo	3
			circular	Canino, Eten Bey, Hargrand, Monaco Bello	4
			obovate	Harcot, Harmat	5

CPVO N°	UPOV N°	Stage, method	Characteristics	Examples	Note
55.	55.		Kernel: bitterness		
QN	QN	(d)	absent or weak	Bergeron, Harcot, Magyar Kajszi, Moniquí, Reale d'Imola	1
			medium	Bella d'Imola, Harlayne, Palsteyn	2
			strong	Borsi Rózsa Canino, Prevete, Viceroy	3
56.	56.		Time of beginning of flowering		
(+)	(+)		very early	Bakour, Currots, Harmat, Ninfa	1
	(*)		early	Canino, Harcot, Hâtif Colomer, San Castrese	3
QN	QN		medium	Magyar Kajszi, Moniquí, Portici, San Francesco	5
			late	Bergeron, Boccuccia Liscia, Harlayne, Polonais	7
G			very late	Harglow, Skromnyj, Zard	9
57.	57.		Time of beginning of fruit ripening		
(+)	(+)		very early	Bakour, Ninfa, Patriarca Temprano, Rutbhart, Samarkandskij Rannij	1
	(*)		early	Bhart, Hâtif Colomer, Monaco Bello, Rouget de Sernhac	3
QN	QN		medium	Bergeron, Harlayne, Pisana, Polonais	5
			late	Borsi Rózsa, Larquen, Revlar	7
G			very late	Boutard, Lartago	9

EXPLANATIONS AND METHODS

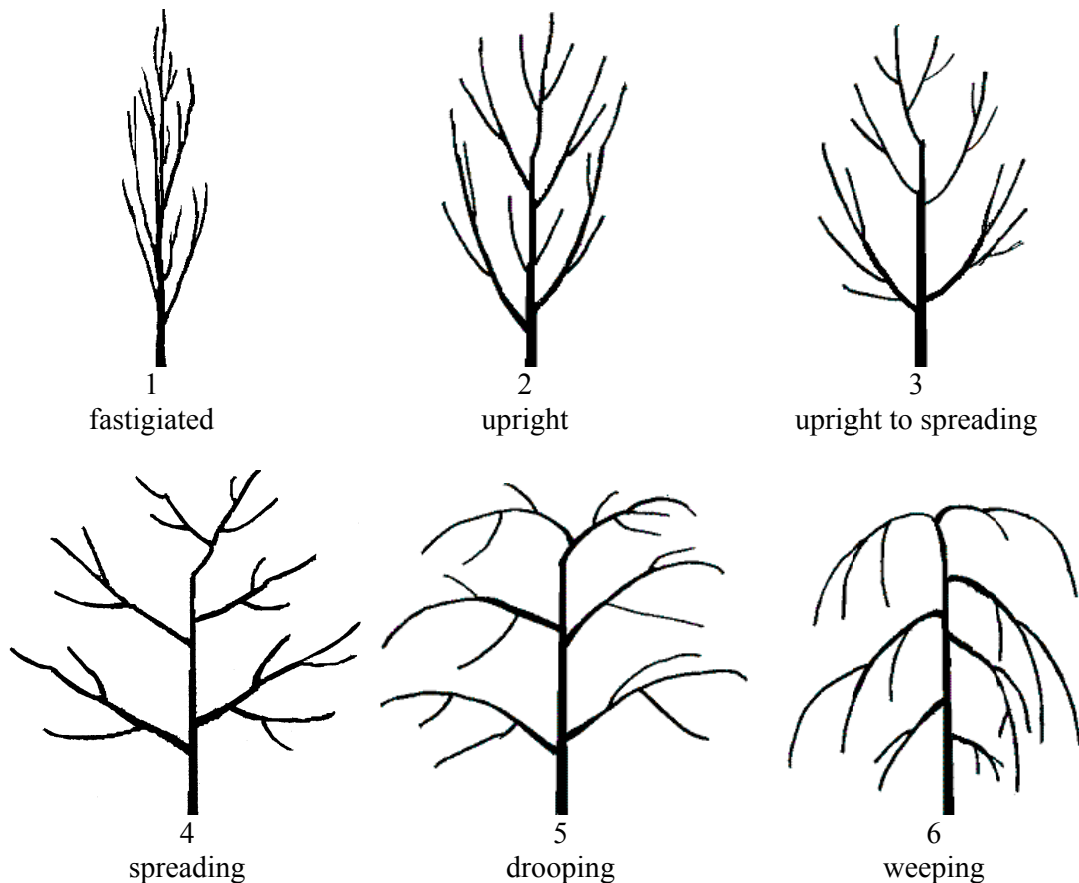
Characteristics containing the following key in the third column of the Table of Characteristics should be examined as indicated below:

- (a) Tree/One-year-old shoot: 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: 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: Observations on the flower should be made on fully developed flowers at the beginning of anther dehiscence.
- (d) Fruit/Stone: Observations on the fruit and stone should be made on 25 fruits, five from each of five trees.

Ad. 1: Tree: vigour

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

Ad. 2: Tree: habit



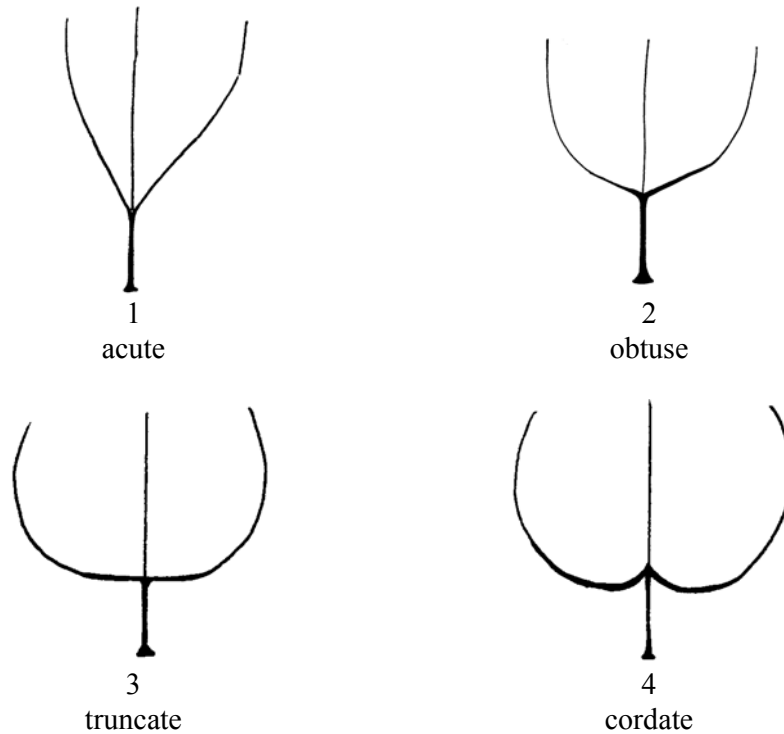
Ad. 3: Tree: degree of branching

Observations should relate to the number of branches with the degree of branching being indicated by the density of lateral branches and shoots, excluding fruiting shoots.

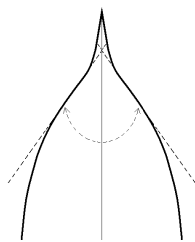
Ad. 6: One-year-old shoot: colour on sunny side

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

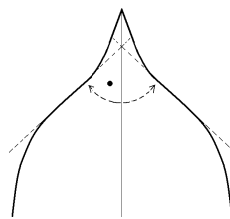
Ad. 12: Leaf blade: shape of base



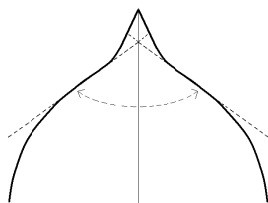
Ad. 13: Leaf blade: angle of apex (excluding tip)



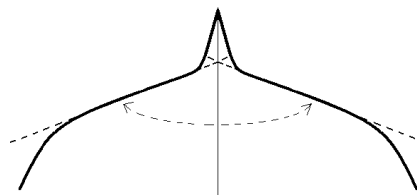
1
acute



2
right-angled



3
moderately obtuse

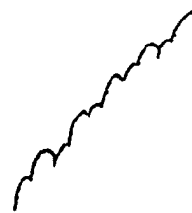


4
strongly obtuse

Ad. 15: Leaf blade: incisions of margin



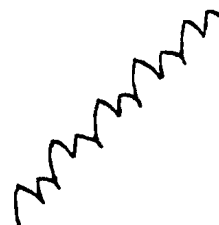
1
crenate



2
bicrenate



3
serrate



4
biserrate

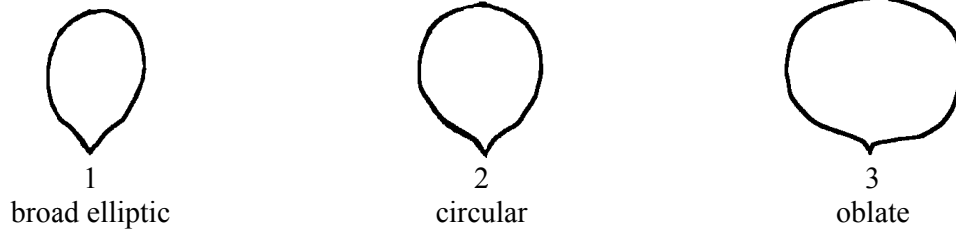
Ad. 17: Leaf blade: profile in cross section

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)

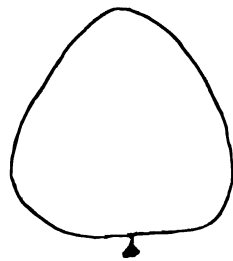


Ad. 27: Petal: colour on lower side

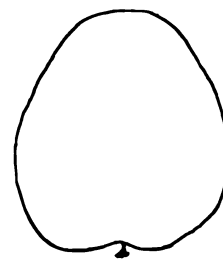
Observations should be carried out just after opening of sepals on the lower side.

Ad. 29: Fruit: shape in lateral view

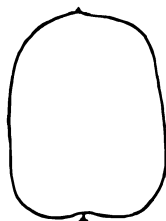
Ad. 30: Fruit: shape in ventral view



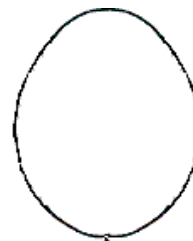
1
triangular



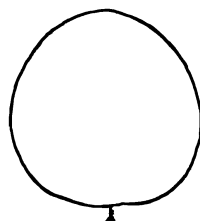
2
ovate



3
oblong



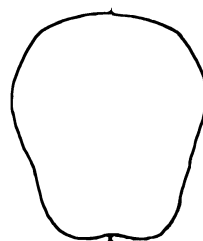
4
elliptic



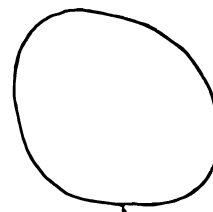
5
circular



6
oblate



7
obovate



8
oblique rhombic
(not applicable for characteristic 30)

Ad. 31: Fruit: height

Ad. 32: Fruit: lateral width

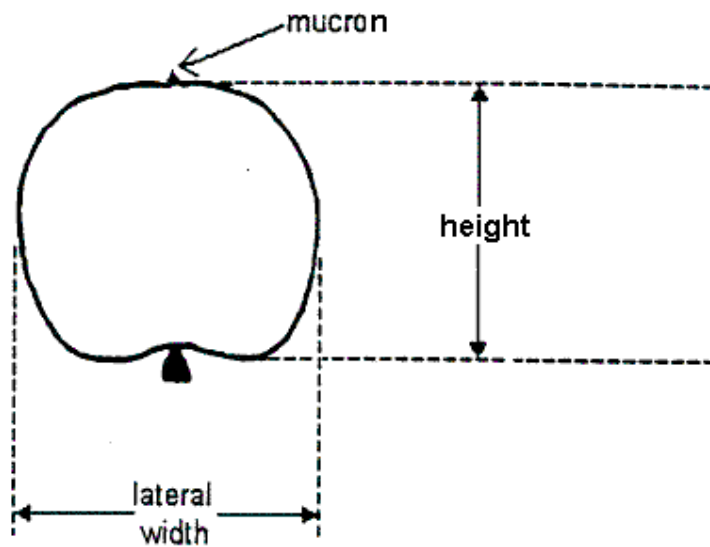
Ad. 33: Fruit: ventral width

Ad. 34: Fruit: ratio height/ventral width

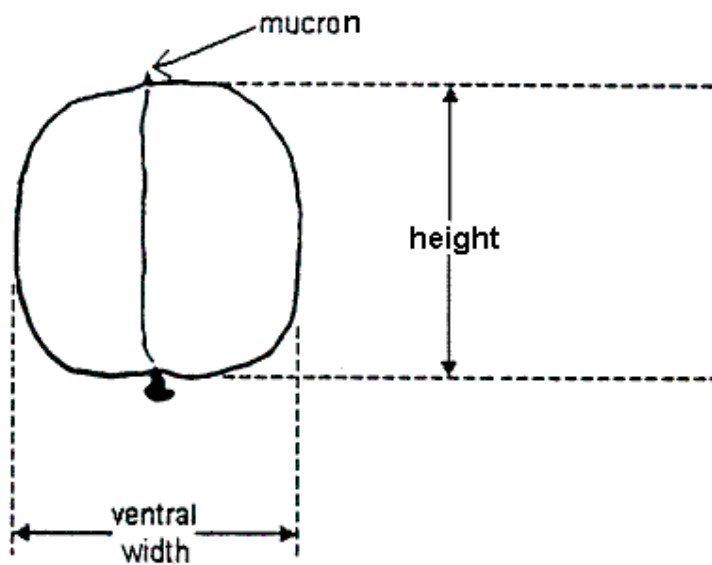
Ad. 35: Fruit: ratio lateral width/ventral width

Ad. 40: Fruit: presence of mucron

Lateral view

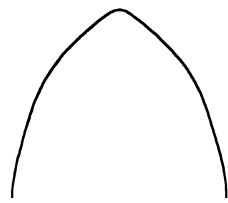


Ventral view

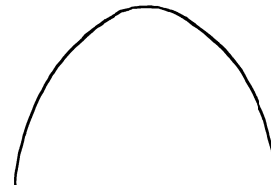


Ad. 39: Fruit: shape of apex

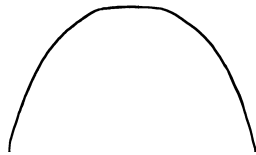
Observations should be carried out on fruits in lateral cross-section.



1
acute



2
rounded

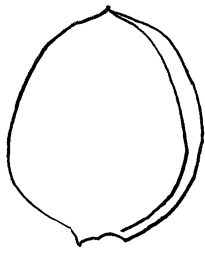


3
truncate

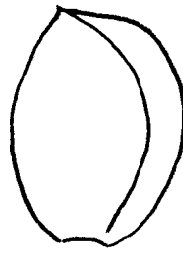


4
retuse

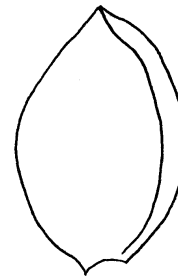
Ad. 54: Stone: shape in lateral view



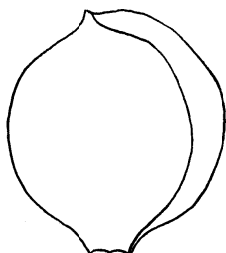
1
ovate



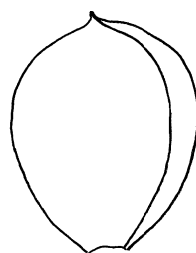
2
oblong



3
elliptic



4
circular



5
obovate

Ad. 56: Time of beginning of flowering

When 5-10% open flowers can be observed.

Ad. 57: 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)
Borsi Rózsa	Kecskemeter Rose, Ružova Neskora, Trandafirii Tirzi
Čačansko zlato	Čačak's Gold
Earle Orange	Stark Earli Orange, Early Orange, Erle Orange
Magyar Kajszi	Cea mai bună de Ungaria, Hungarian Best, Klosterneuburger Aprikose Krasnoshchokij, Mađarska Najbolja, Mađarská Najlepsi, Meilleur d'Hongrie, Ungarische Beste, Węgierska Wczesna
Pineapple	Abricot d'Ananas, Ananas-Marille, Ananasnyj
Proimo Tyrinthos	Précoce de Tyrinthe
Sant' Ambrogio	Ambrojza, Ambrosia, Saint Ambroise
Sateni Karmir	Tabarza
Yerevani	Shalakh

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.
- Guerriero, R., Monteleone, P., 1992(a): "Distribuzione di alcuni caratteri tassonomici in una collezione di oltre 100 cultivar di albicocco". Atti del Congresso su "Germoplasma frutticolo. Salvaguardia e valorizzazione delle risorse genetiche" Alghero; p. 343-348, IT.
- Guerriero R., Monteleone P., 1992(b): "Principali caratteristiche tassonomiche e agronomiche di 28 cultivar di albicocco italiane in pericolo di estinzione". Atti del Congresso su "Germoplasma frutticolo. Salvaguardia e valorizzazione delle risorse genetiche" Alghero; 349-356, 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: "Kajszibarack (Apricot)," Mezőgazdasági Kiadó, Budapest, HU.
- Nyujtó, F., Tomcsányi, P., 1959: "A kajszibarack 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: "Pomologiya". 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 Moldovenyaske, 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.

ANNEX II



European Union
Community Plant Variety Office

TECHNICAL QUESTIONNAIRE

to be completed in connection with an application for Community Plant Variety Rights
Please answer all questions. A question without any answer will lead to a non-attribution of an application date. In cases where a field / question is not applicable, please state so.

1. **Botanical taxon:** Name of the genus, species or sub-species to which the variety belongs and common name

Prunus armeniaca L.

APRICOT

2. **Applicant(s):** Name(s) and address(es), phone and fax number(s), Email address, and where appropriate name and address of the procedural representative

3. **Variety denomination**

a) Where appropriate proposal for a variety denomination:

b) Provisional designation (breeder's reference):

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

4.1 Breeding, maintenance and reproduction of the variety

Please indicate breeding scheme, parents and other relevant information

- (a) Seedling of unknown parentage..... []
- (b) Produced by controlled pollination (indicate parent varieties) []
 - (i) Seed bearing parent..... []
 - (ii) Pollen parent []
- (c) Produced by open pollination of (indicate seed bearing parent only)..... []
- (d) Mutation or sport from (indicate parent variety) []
- (e) Discovery (indicate where and when)..... []

4.2 Method of propagation

- (a) Cuttings..... []
- (b) *In vitro* propagation []
- (c) Seed []
- (d) Other (please specify): []

4.3 Pollinator

Good pollinators are the following varieties :

4.4 Virus status

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

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

- (c) The virus status is unknown []

4.5 Other information on genetic origin and breeding method:

4.6 Geographical origin of the variety: the region and the country in which the variety was bred or discovered and developed

5. Characteristics of the variety to be indicated (the number in brackets refers to the corresponding characteristic in the CPVO Protocol; please mark the state of expression which best corresponds).			
	Characteristics	Example varieties	Note
5.1 (28)	Fruit: size		
	very small	Haggit, Menace, Zard	1 []
	small	Borsi rózsza, Hâtif Colomer, Patriarca Temprano	3 []
	medium	Cafona, Canino, Harcot	5 []
	large	Ceglédi bíbor, Moniquí, Portici	7 []
	very large	Ceglédi óriás, Hargrand, Palsteyn, Pisana	9 []
5.2 (44)	Fruit: ground colour of skin		
	not visible	A 3759, A 3844	1 []
	white	San Nicola, Shirazskij belyj	2 []
	yellowish	Moniquí, Piet Cillié, Vitillo, Yerevani	3 []
	yellow green	Grüne Spätmarille, Kaisi Ashtarak, Sateni Karmir	4 []
	light orange	Canino, Goldcot, Hargrand, Portici, Rouge du Roussillon	5 []
	medium orange	Hâtif Colomer, Luizet, Pisana, Veecot	6 []
	dark orange	Bhart, Harcot, Harogem	7 []
5.3 (45)	Fruit: amount of over colour		
	absent or very low	Maria Matilde, Moniquí, Yerevani	1 []
	low	Cafona, Canino, Goldrich	3 []
	medium	Hâtif Colomer, Magyar kajsz, Palsteyn, Portici	5 []
	large	Bergeron, Bhart, Pisana	7 []
	very large	A 3759, A 3844	9 []

	Characteristics	Example varieties	Note
5.4 (49)	Fruit: colour of flesh		
	whitish green	Amban	1 []
	white	Cibo del Paradiso, Mouchbah Mourry, Spitak	2 []
	cream	Barese, Malatya, Moniquí, Patriarca Temprano	3 []
	light orange	Canino, Harmat, San Castrese, Yerevani	4 []
	medium orange	Harglow, Pisana, Rouge du Roussillon, Screara	5 []
	dark orange	Francese, Harcot, Hâtif Colomer, Palsteyn	6 []
5.5 (56)	Time of beginning of flowering		
	very early	Bakour, Currots, Harmat, Ninfa	1 []
	early	Canino, Harcot, Hâtif Colomer, San Castrese	3 []
	medium	Magyar kajszí, Moniquí, Portici, San Francesco	5 []
	late	Bergeron, Boccuccia Liscia, Harlayne, Polonais	7 []
	very late	Harglow, Skromnyj, Zard	9 []
5.6 (57)	Time of beginning of fruit ripening		
	very early	Barkour, Ninfa, Patriarca Temprano, Rutbhart, Samarkandskij rannij	1 []
	early	Bhart, Hâtif Colomer, Monaco Bello, Rouget de Sernhac	3 []
	medium	Bergeron, Harlayne, Pisana, Polonais	5 []
	late	Borsi rózsa, Larqueen, Revlar	7 []
	very late	Boutard, Lartago	9 []

6. Similar varieties and differences from these varieties:			
Denomination of similar variety	Characteristic in which the similar variety is different ¹⁾	State of expression of similar variety	State of expression of candidate variety
<hr/> <p>¹⁾ In the case of identical states of expressions of both varieties, please indicate the size of the difference</p>			
7. Additional information which may help to distinguish the variety			
<p>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?</p> <p><input type="checkbox"/> YES, please specify</p> <p><input type="checkbox"/> NO</p>			
7.2 Special conditions for the examination of the variety			
<p>7.2.1 Please specify any frost requirements or chilling hour requirements for the correct development of plant material of the candidate variety in the DUS trial field:</p> <p>7.2.2 Are there any other special conditions for growing the variety or conducting the examination?</p> <p><input type="checkbox"/> YES, please specify</p> <p><input type="checkbox"/> NO</p>			

7.3 Other information

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

8. GMO-information required

The variety represents a Genetically Modified Organism within the meaning of Article 2(2) of Council Directive EC/2001/18 of 12/03/2001.

YES NO

If yes, please add a copy of the written attestation of the responsible authorities stating that a technical examination of the variety under Articles 55 and 56 of the Basic Regulation does not pose risks to the environment according to the norms of the above-mentioned Directive.

I/we hereby declare that to the best of my/our knowledge the information given in this form is complete and correct.

Date

Signature

Name

[End of document]