

PROTOCOL FOR TESTS ON DISTINCTNESS, UNIFORMITY AND STABILITY

Prunus persica (L.) Batsch.

PEACH

UPOV Code: PRUNU_PER

Adopted on 28/11/2023

Entry into force on 28/11/2023

CPVO-TP/053/2-rev.2 based on the version 5 of the CPVO-TP/template

TABLE OF CONTENTS

CPVO-TP/053/2-Rev.2

1.	SUBJ	JBJECT OF THE PROTOCOL AND REPORTING				
1	1	Scope of the technical protocol				
1	2	Entry into Force				
1	3	Reporting between Examination Office and CPVO and Liaison with Applicant				
2.	MATE	ERIAL REQUIRED				
2	2.1	Plant material requirements4				
2	2.2	Informing the applicant of plant material requirements				
2	2.3	Informing about problems on the submission of material				
3.	METH	HOD OF EXAMINATION				
3	8.1	Number of growing cycles4				
3	8.2	Testing Place				
3	8.3	Conditions for Conducting the Examination				
3	8.4	Test design				
3	8.5	Special tests for additional characteristics				
3	8.6	Constitution and maintenance of a variety collection				
4.	ASSE	SSMENT OF DISTINCTNESS, UNIFORMITY AND STABILITY				
2	1.1	Distinctness				
2	1.2	Uniformity7				
4	1.3	Stability				
5.	GRO	JPING OF VARIETIES AND ORGANISATION OF THE GROWING TRIAL				
6.	INTR	ODUCTION TO THE TABLE OF CHARACTERISTICS				
6	5.1	Characteristics to be used				
6	5.2.	States of expression and corresponding notes				
6	5.3	Example Varieties				
6	5.4	Legend9				
7.	TABL	E OF CHARACTERISTICS				
8.	EXPL	ANATIONS ON THE TABLE OF CHARACTERISTICS				
8	3.1	Explanations covering several characteristics				
8	3.2	Explanations for individual characteristics				
9	LITE	RATURE				
5.						

1. SUBJECT OF THE PROTOCOL AND REPORTING

1.1 Scope of the technical protocol

This Technical Protocol applies to all varieties of *Prunus persica* (L.) Batsch.

The protocol describes the technical procedures to be followed in order to meet the requirements of Council Regulation 2100/94 on Community Plant Variety Rights. The technical procedures have been agreed by the Administrative Council and are based on documents agreed by the International Union for the Protection of New Varieties of Plants (UPOV), such as the General Introduction DUS (UPOV Document TG/1/3 to http://www.upov.int/export/sites/upov/resource/en/tg 1 3.pdf), its associated TGP documents (http://www.upov.int/tqp/en/) and the relevant UPOV Test Guideline TG/53/7 dated 26/10/2021 (https://www.upov.int/edocs/tgdocs/en/tg053.pdf) for the conduct of tests for Distinctness, Uniformity and Stability.

1.2 Entry into Force

The present protocol enters into force on **28.11.2023**. Any ongoing DUS examination of candidate varieties for which the first growing cycle for the purpose of observations has started (following the adequate period of establishment) before the aforesaid date will not be affected by the approval of the Technical Protocol.

Technical examinations of candidate varieties are carried out according to the TP in force when the first growing cycle for the purpose of observations following the adequate period of establishment starts.

In cases where the Office requests to take-over a DUS report for which the technical examination has either been finalized or which is in the process to be carried out at the moment of this request, such report can only be accepted if the technical examination has been carried out according to the CPVO TP which was in force at the moment when the first growing cycle for the purpose of observations following the adequate period of establishment started.

1.3 Reporting between Examination Office and CPVO and Liaison with Applicant

1.3.1 Reporting between Examination Office and CPVO

The Examination Office shall deliver to the CPVO a preliminary report ("the preliminary report") no later than four weeks after the date of the request for technical examination by the CPVO and in any case preferably before the submission period of the plant material.

The Examination Office shall also deliver to the CPVO a report relating to each growing period ("the interim report") and, when the Examination Office considers the results of the technical examination to be adequate to evaluate the variety or the CPVO so requests, a report relating to the examination ("the final report").

The final report shall state the opinion of the Examination Office on the distinctness, uniformity and stability of the variety. Where it considers those criteria to be satisfied, or where the CPVO so requests, a description of the variety shall be added to the report.

If a report is negative the Examination Office shall set out the detailed reasons for its findings.

The variety description should be supplemented by representative pictures of the whole fruit: ventral view and from above, as well as the fruit cut open: ventral view and from above.

The interim and the final reports shall be delivered to the CPVO as soon as possible and no later than on the deadlines as laid down in the designation agreement.

1.3.2 Informing on problems in the DUS test

In cases where the Examination Office identifies issues during the course of the technical examination that may lead to a negative report, the Examination Office shall inform the CPVO and in urgent cases the applicant/holder as soon as such issues become obvious.

1.3.3 Sample keeping in case of problems

As far as feasible the Examination Office shall keep a representative sample of any relevant testing material of the candidate variety and reference variety(ies) if the technical examination has resulted in a negative report. As soon as possible, the CPVO shall inform the Examination Office when the material can be destroyed.

2. MATERIAL REQUIRED

2.1 Plant material requirements

Information with respect to the agreed closing dates and submission requirements of plant material for the technical examination of varieties can be found on https://public.plantvarieties.eu/publication in the special issue S2/S3 of the Official Gazette of the Office. General requirements on submission of samples are also to be found following the same link.

2.2 Informing the applicant of plant material requirements

The CPVO informs the applicant that:

- he is responsible for ensuring compliance with any customs and plant health requirements;
- the plant material supplied should be visibly healthy, not lacking in vigour, nor affected by any important pest or disease;
- 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.

2.3 Informing about problems on the submission of material

The Examination Office shall report to the CPVO immediately in cases where the test material of the candidate variety has not arrived in time or in cases where the material submitted does not fulfil the conditions laid down in the request for submission of plant material issued by the CPVO.

In cases where the examination office encounters difficulties to obtain plant material of reference varieties the CPVO should be informed in writing.

3. METHOD OF EXAMINATION

3.1 Number of growing cycles

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

The testing of a variety may be concluded when the entrusted examination office can determine with certainty the outcome of the test.

The duration of tests should be two independent growing cycles for the purpose of observation of characteristics following an adequate number of growing cycles for establishment of plants; at the end of each growing cycle for the purpose of observation of characteristics the competent authority will determine whether or not the following growing cycle is required.

In particular, it is essential that the trees produce a satisfactory crop of fruit in each of the two growing cycles.

The two independent growing cycles may be observed from a single planting, examined in two separate growing cycles.

3.1.2 The growing cycle is considered to be the duration of a single growing season, beginning with bud burst (flowering and/or vegetative), flowering and fruit harvest and concluding when the following dormant period ends with the swelling of new season buds.

3.2 Testing Place

Tests are normally conducted at one place. In the case of tests conducted at more than one place, guidance is provided in TGP/9 "Examining Distinctness" <u>http://www.upov.int/edocs/tgpdocs/en/tgp_9.pdf.</u>

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.

Because daylight varies, colour determinations made against a colour chart should be made either in a suitable cabinet providing artificial daylight or in the middle of the day in a room without direct sunlight. The spectral distribution of the illuminant for artificial daylight should conform with the CIE Standard of Preferred Daylight D 6500 and should fall within the tolerances set out in the British Standard 950, Part I. These determinations should be made with the plant part placed against a white background. The colour chart and version used should be specified in the variety description.

3.4 Test design

- 3.4.1 Each test should be designed to result in a total of at least 3 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 Special tests for additional characteristics

In accordance with Article 23 of Implementing Rules N° 874/2009 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 characteristics listed in the protocol.

3.6 Constitution and maintenance of a variety collection

The process for the constitution and the maintenance of a variety collection can be summarized as follows:

Step 1: Making an inventory of the varieties of common knowledge.

Step 2: Establishing a collection ("variety collection") of varieties of common knowledge which are relevant for the examination of distinctness of candidate varieties.

Step 3: Selecting the varieties from the variety collection which need to be included in the growing trial or other tests for the examination of distinctness of a particular candidate variety.

3.6.1 Forms of variety collection

In addition, the variety collection shall comprise images (e.g., photographs, illustrations or digitalized images) of representative parts of the plants of each variety, produced by the respective EO.

The following forms of variety descriptions are considered sufficient:

- a variety description according to the applicable protocol which has not been produced by the EO establishing the variety collection;
- a variety description produced by another party where the variety is registered;
- images (e.g., photographs, illustrations or digitalized images) of representative parts of the plants;
- relevant descriptive information from, for example, scientific publications, commercial catalogues, databases, etc.

3.6.2 Living Plant Material

The EO shall collect and maintain living plant material of varieties of the species concerned in the variety collection.

The EO may only obtain living plant material of reference varieties as and when those varieties need to be included in growing trials or other tests.

Living plant material of reference varieties identified to be included in the growing trial may be taken from the EO's collection in case there is one or shall be obtained specifically for the growing trial or other tests.

3.6.3 <u>Range of the variety collection</u>

The living variety collection shall cover at least those common knowledge varieties that are suitable to grow in the climatic conditions of a respective EO.

3.6.4 Making an inventory of varieties of common knowledge for inclusion in the variety collection

The inventory shall include varieties protected under National and Community PBR, varieties of National Catalogues (where such catalogues exist) and varieties in trade or in commercial registers.

The inventory shall take into account the list of varieties which are the subject of an on-going application for protection or official registration (candidate varieties).

In addition to the above, the inventory shall be extended to the appropriate to

- relevant example varieties referred to in the technical protocols.
- any commercial document in which varieties are marketed as propagating or harvested material, especially when there is no official registration system.
- any list including varieties which are publicly available within plant collections (varieties included in genetic resource collections, collection of old varieties, etc.).
- information provided by relevant plant experts.

3.6.5 Maintenance and renewal/update of a living variety collection

The EO shall maintain the variety collection under appropriate growing conditions (e.g., glasshouse, orchard, in vitro), where it shall be ensured that the plants are adequately irrigated, fertilised, pruned and protected from harmful pests and diseases.

Living material in variety collections representing varieties for which a DUS test was carried out at that EO shall be renewed after verification in a side-by-side comparison. In case where no living material is available anymore in the collection, such verification could be done with any other test that has proven to give similar results between the material in the collection and the new material.

4. ASSESSMENT OF DISTINCTNESS, UNIFORMITY AND STABILITY

The prescribed procedure is to assess distinctness, uniformity and stability in a growing trial.

4.1 Distinctness

4.1.1 General recommendations

It is of particular importance for users of this Technical Protocol to consult the UPOV-General Introduction to DUS (link in chapter 1 of this document) and TGP 9 'Examining Distinctness' (<u>http://www.upov.int/edocs/tgpdocs/en/tgp 9.pdf</u>) prior to making decisions regarding distinctness. However, the following points are provided for elaboration or emphasis in this Technical Protocol.

Further guidance is provided in documents TGP/9 "Examining Distinctness" and TGP/8 "Trial Design and Techniques Used in the Examination of Distinctness, Uniformity and Stability".

4.1.2 Consistent differences

The differences observed between varieties may be so clear that more than one growing cycle is not necessary. In addition, in some circumstances, the influence of the environment is not such that more than a single growing cycle is required to provide assurance that the differences observed between varieties are sufficiently consistent. One means of ensuring that a difference in a characteristic, observed in a growing trial, is sufficiently consistent is to examine the characteristic in at least two independent growing cycles.

4.1.3 <u>Clear differences</u>

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 Technical Protocols are familiar with the recommendations contained in the UPOV-General Introduction to DUS prior to making decisions regarding distinctness.

4.1.4 <u>Number of plants/parts of plants to be examined</u>

Unless otherwise indicated, for the purposes of distinctness, all observations on single plants should be made on 3 plants or parts taken from each of 3 plants and any other observations made on all plants in the test, disregarding any off-type plants.

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

4.1.5 Method of observation

The recommended method of observing the characteristic for the purposes of distinctness is indicated by the following key in the third column of the Table of Characteristics (see document TGP/9 "Examining Distinctness", Section 4 "Observation of characteristics"):

- MG: single measurement of a group of plants or parts of plants
- MS: measurement of a number of individual plants or parts of plants
- VG: visual assessment by a single observation of a group of plants or parts of plants
- VS: visual assessment by observation of individual plants or parts of plants

Type of observation: visual (V) or measurement (M)

"Visual" observation (V) is an observation made on the basis of the expert's judgment. For the purposes of this document, "visual" observation refers to the sensory observations of the experts and, therefore, also includes smell, taste and touch. Visual observation includes observations where the expert uses reference points (e.g., diagrams, example varieties, sideby-side comparison) or non-linear charts (e.g., colour charts). Measurement (M) is an objective observation against a calibrated, linear scale e.g., using a ruler, weighing scales, colorimeter, dates, counts, etc.

Type of record: for a group of plants (G) or for single, individual plants (S)

For the purposes of distinctness, observations may be recorded as a single record for a group of plants or parts of plants (G) or may be recorded as records for a number of single, individual plants or parts of plants (S). In most cases, "G" provides a single record per variety, and it is not possible or necessary to apply statistical methods in a plant-by-plant analysis for the assessment of distinctness.

In cases where more than one method of observing the characteristic is indicated in the Table of Characteristics (e.g., VG/MG), guidance on selecting an appropriate method is provided in document TGP/9, Section 4.2.

4.2 Uniformity

- 4.2.1 It is of particular importance for users of this Technical Protocol to consult the UPOV-General Introduction to DUS (link in chapter 1 of this document) and TGP 10 'Examining Uniformity' (<u>http://www.upov.int/edocs/tgpdocs/en/tgp_10.pdf</u>) prior to making decisions regarding uniformity. However, the following points are provided for elaboration or emphasis in this Technical Protocol:
- 4.2.2 This Technical Protocol has been developed for the examination of vegetatively propagated varieties. For varieties with other types of propagation the recommendations in the UPOV-General Introduction to DUS and document TGP/13 "Guidance for new types and species", Section 4.5 "Testing Uniformity" should be followed.

For the assessment of uniformity of vegetatively propagated varieties, a population standard of no off-types are allowed.

4.3 Stability

4.3.1 It is of particular importance for users of this Technical Protocol to consult the UPOV-General Introduction to DUS (link in chapter 1 of this document) and TGP 11 'Examining Stability' (<u>http://www.upov.int/edocs/tgpdocs/en/tgp 11.pd</u>)

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.

Where appropriate, or in cases of doubt, stability may be further examined by testing a new plant stock to ensure that it exhibits the same characteristics as those shown by the initial material supplied.

5. GROUPING OF VARIETIES AND ORGANISATION OF THE GROWING TRIAL

- **5.1** The selection of varieties of common knowledge to be grown in the trial with the candidate varieties and the way in which these varieties are divided into groups to facilitate the assessment of distinctness are aided by the use of grouping characteristics.
- **5.2** Grouping characteristics are those in which the documented states of expression, even where produced at different locations, can be used, either individually or in combination with other such characteristics: (a) to select varieties of common knowledge that can be excluded from the growing trial used for examination of distinctness; and (b) to organise the growing trial so that similar varieties are grouped together.

- **5.3** The following have been agreed as useful grouping characteristics:
 - a) Tree size (characteristic 1)
 - b) Flower: type (characteristic 9)
 - c) Leaf blade: red mid-vein on the lower side (characteristic 28)
 - d) Petiole: nectaries (characteristic 30)
 - e) Petiole: shape of nectaries (characteristic 31)
 - f) Fruit: shape (in ventral view) (characteristic 33)
 - g) Fruit: pubescence of skin (characteristic 44)
 - h) Fruit: carotenoid coloration of flesh (characteristic 51)
 - i) Fruit: acidity (characteristic 60) with the following groups:
 - low
 - medium
 - high
 - j) Fruit: flesh type (TQ characteristic) with the following groups:
 - melting
 - non-melting
 - stony hard
 - k) Time of beginning of flowering (characteristic 69)
 - I) Time of maturity (characteristic 70)
- **5.4** If characteristics other than those mentioned in the list of grouping characteristics and/or from the table of characteristics and/or from the Technical Questionnaire sections 5 and 7. are used for the selection of varieties to be included into the growing trial, the EO shall inform the CPVO and seek the prior consent of the CPVO before using these characteristics.
- **5.5** Guidance for the use of grouping characteristics, in the process of examining distinctness, is provided through the UPOV-General Introduction to DUS and document TGP/9 "Examining Distinctness".

6. INTRODUCTION TO THE TABLE OF CHARACTERISTICS

6.1 Characteristics to be used

The characteristics to be used in DUS tests and preparation of descriptions shall be those referred to in the table of characteristics. 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 or by specific legislation on plant health. In the latter case, the CPVO should be informed.

The Administrative Council empowers the President, in accordance with Article 23 of Commission Regulation N°874/2009, to insert additional characteristics and their expressions in respect of a variety.

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. All relevant states of expression are presented in the characteristic.

Further explanation of the presentation of states of expression and notes is provided in UPOV document TGP/7 "Development of Test Guidelines".

6.3 Example Varieties

Where appropriate, example varieties are provided to clarify the states of expression of each characteristic.

6.4 Legend

For colur	nn <u>'CPVO N°</u> ':	
G	Grouping characteristic	-see Chapter 5
QL	Qualitative characteristic	
QN	Quantitative characteristic	
PQ	Pseudo-qualitative characteristic	
(+)	Explanations for individual characteristics	-see Chapter 8.2

<u>For column 'UPOV N°</u>': The numbering of the characteristics is provided as a reference to the UPOV guideline.

(*)	UPOV Asterisked characteristic	- Characteristics that are important for the international harmonization of variety descriptions.
For colum	<u>1 'Stage, method':</u>	
MG, MS, V	G, VS	-see Chapter 4.1.5
(a)-(g)	Explanations covering several Characteristics	-see Chapter 8.1

7. TABLE OF CHARACTERISTICS

CPVO N°	UPOV N°	Stage, Method	Characteristics	Examples	Note
1.	1. (*)	VG	Tree: size		
QN		(a)	very small	Bonanza, Bonfire, Pix Zee, Zaino	1
			very small to small		2
			small	Richaven	3
			small to medium		4
			medium	Robin	5
			medium to large		6
			large	Redhaven	7
			large to very large		8
G			very large	Champion	9
2. (+)	2.	VG	Tree: vigour		
QN		(b)	very weak		1
			very weak to weak		2
			weak	J. H. Hale	3
			weak to medium		4
			medium	Robin	5
			medium to strong		6
			strong	Springtime	7
			strong to very strong		8
			very strong		9
3. (+)	3. (*)	VG	Tree: habit		
QN		(a)	fastigiate	Nectarose, Pillar	1
			upright	Fairhaven, Redwing	2
			upright to spreading	Albertina, Elegant Lady, Mercil	3
			spreading	Charles Roux	4
			drooping	Biancopendulo	5

CPVO N°	UPOV N°	Stage, Method	Characteristics	Examples	Note
4.	4.	VG	Flowering shoot: thickness		
QN		(a)	very thin		1
			very thin to thin		2
			thin	Mayred	3
			thin to medium		4
			medium	Redhaven	5
			medium to thick		6
			thick	Flavorcrest, Lizzie	7
			thick to very thick		8
			very thick		9
5.	5.	VG	Flowering shoot: length of internodes		
QN		(a), (d)	very short	Bonanza, Bonfire, Pix Zee, Zaino	1
			very short to short		2
			short	June Gold, Merrill Sundance	3
			short to medium		4
			medium	Redhaven	5
			medium to long		6
			long	Fairhaven	7
			long to very long		8
			very long	Flacara	9
6.	6. (*)	VG	Flowering shoot: presence of anthocyanin coloration		
QL		(d)	absent	De flor doble blanca	1
			present	Robin	9

CPVO N°	UPOV N°	Stage, Method	Characteristics	Examples	Note
7. (+)	7.	VG	Flowering shoot: intensity of anthocyanin coloration		
QN		(d)	very weak	Biancopendulo, De flor doble blanca	1
			very weak to weak		2
			weak	Springtime	3
			weak to medium		4
			medium	Fuzalode	5
			medium to strong		6
			strong	Robin, Sanguine Chanas	7
			strong to very strong		8
			very strong		9
8. (+)	8.	VG	Flowering shoot: density of flower buds		
QN		(a), (d)	very sparse	Monline	1
			very sparse to sparse		2
			sparse	Mercil, Zaitabo	3
			sparse to medium		4
			medium	Craucail, Flacara, Michelini, Rich Lady	5
			medium to dense		6
			dense	Momée	7
			dense to very dense		8
			very dense	Armking, Harco	9
9. (+)	9. (*)	VG	Flower: type		
QL		(d), (e)	campanulate	Dida, Springtime	1
G			rosette	Robin, Vesuvio	2

CPVO N°	UPOV N°	Stage, Method	Characteristics	Examples	Note
10. (+)	10. (*)	VG	Corolla: main colour (inner side)		
PQ		(d), (e)	white	Baincopendulo, De flor doble blanca	1
			very light pink	Cardinal	2
			light pink	Michelini	3
			medium pink	Alexia, Fuzalode	4
			dark pink	Flacara, Vivian	5
			violet pink	Candor	6
			red	Red Flower Peach	7
11. (+)	11. (*)	VG	Petal: shape		
PQ		(d), (e)	narrow ovate		1
			medium ovate		2
			narrow elliptic		3
			medium elliptic		4
			circular		5
12. (+)	12.	VG/MS	<u>Only variety with flower type</u> <u>campanulate</u> : Petal: width		
QN		(d), (e)	very narrow		1
			narrow	Meydicte	2
			medium	Bradgust	3
			broad	Monnail	4
			very broad		5
13. (+)	13. (*)	VG/MS	<u>Only varieties with flower type:</u> <u>rosette</u> : Petal: width		
QN		(d), (e)	very narrow	Triumph	1
			narrow	Shasta	2
			medium	Robin	3
			broad	Michelini	4
			very broad	Veteran	5

CPVO N°	UPOV N°	Stage, Method	Characteristics	Examples	Note
14. (+)	14. (*)	VG	Flower: number of petals		
QL		(d), (e)	five	Redhaven	1
			more than five	Red Flower Peach, Royal Glo	2
15. (+)	15.	VG	Stamen: position compared to petals		
QN		(d), (e)	below	Loring	1
			same level	Robin, Springtime	2
			above	Redhaven	3
16. (+)	16. (*)	VG	Stigma: position compared to anthers		
QN		(d), (e)	below	Vivian	1
			same level	Crimson Gold	2
			above	Fuzalode	3
17.	17. (*)	VG	Anthers: pollen		
QL		(d), (e)	absent	J. H. Hale	1
			present	Redhaven	9
18.	18 . (*)	VG	Ovary: pubescence		
QL			absent	Fuzalode	1
			present	Redhaven	9

CPVO N°	UPOV N°	Stage, Method	Characteristics	Examples	Note
19. (+)	19.	VG/MS	Stipule: length		
QN		(d), (e)	very short		1
			very short to short		2
			short	Redhaven	3
			short to medium		4
			medium	Robin	5
			medium to long		6
			long	Dixired	7
			long to very long		8
			very long		9
20. (+)	20. (*)	VG/MS	Leaf blade: length		
QN		(b)	very short		1
			very short to short		2
			short	Jeronimo	3
			short to medium		4
			medium	Fairhaven	5
			medium to long		6
			long	Southland	7
			long to very long		8
			very long		9

CPVO N°	UPOV N°	Stage, Method	Characteristics	Examples	Note
21. (+)	21. (*)	VG/MS	Leaf blade: width		
QN		(b)	very narrow		1
			very narrow to narrow		2
			narrow	Redhaven	3
			narrow to medium		4
			medium	Robin	5
			medium to broad		6
			broad	Dixired	7
			broad to very broad		8
			very broad		9
22. (+)	22. (*)	VG/MS	Leaf blade: ratio length/width		
QN		(b)	very low		1
			very low to low		2
			low	Mountaingold	3
			low to medium		4
			medium	Early Sungrand	5
			medium to high		6
			high	Springtime, Vivian	7
			high to very high		8
			very high		9
23. (+)	23.	VG	Leaf blade: shape in cross section		
QL		(b)	concave	Merrill Gemfree	1
			flat	Mayred	2
24. (+)	24.	VG	Leaf blade: margin		
PQ		(b)	crenate	Crimson Glo	1
			shallow serrate	Fiesta Red	2
			deep serrate	Bailey	3

CPVO N°	UPOV N°	Stage, Method	Characteristics	Examples	Note
25. (+)	25.	VG	Leaf blade: angle at base		
QN		(b)	acute	Springtime	1
			right angle	Redhaven	2
			obtuse	Merrill Franciscan	3
26.	26.	VG	Leaf blade: angle at apex		
QN		(b)	very small		1
			very small to small		2
			small	Red June	3
			small to medium		4
			medium	Earlired	5
			medium to large		6
			large	Merrill Franciscan	7
			large to very large		8
			very large		9
27.	27.	VG	Leaf blade: colour		
PQ		(b)	greenish yellow	Redhaven	1
			light green	Silver Fire	2
			medium green	Robin	3
			dark green	Fiesta Red	4
			purplish red	Garnem, Goldcrest, Rubira	5
28. (+)	28. (*)	VG	Leaf blade: red mid-vein on the lower side		
QL		(b)	Absent	Redhaven	1
G			present	Sanguine Chanas	9

CPVO N°	UPOV N°	Stage, Method	Characteristics	Examples	Note
29. (+)	29.	VG/MS	Petiole: length		
QN			very short		1
			very short to short		2
			short	Redhaven	3
			short to medium		4
			medium	Grenadix 7	5
			medium to long		6
			long	Andross	7
			long to very long		8
			very long		9
30. (+)	30. (*)	VG	Petiole: nectaries		
QL		(c)	absent	Crimson Glo, Tejon	1
G			present	Redhaven	9
31. (+)	31. (*)	VG	Petiole: shape of nectaries		
QL		(c)	round	Springtime	1
G			reniform	Redhaven	2
32.	32. (*)	VG/MS	Fruit: size		
QN		(f)	very small	Nectarine-Cerise	1
			very small to small		2
			small	Minastar, Springtime	3
			small to medium		4
			medium	Momée, Springlady, Sunhaven	5
			medium to large		6
			large	Loring, Zaifer, Zaitabo	7
			large to very large		8
			very large	Comanche, Maillarbig	9

CPVO N°	UPOV N°	Stage, Method	Characteristics	Examples	Note
33. (+)	33. (*)	VG	Fruit: shape (in ventral view)		
PQ		(f)	broad oblate	Alex, Bailou, UFO3	1
			medium oblate	Herastrau, Robin	2
			circular	Redwing	3
			broad elliptic	Cavalier	4
G			medium elliptic	Elberta	5
34. (+)	34.	VG	Fruit: mucron tip at pistil end		
QL		(f)	absent	Robin	1
			present	Jerseyland, Springtime	9
35. (+)	35.	VG	Fruit: shape of pistil end (without mucron tip)		
QN			prominently pointed	Jerseyland	1
			weakly pointed	Springtime	2
			flat	Redhaven	3
			weakly depressed	Robin	4
			strongly depressed	Bailou, UFO3	5
36. (+)	36.	VG	Fruit: symmetry (viewed from pistil end)		
QN		(f)	symmetric	Redhaven	1
			moderately asymmetric	Brittney Lane, Jim Dandy	2
			strongly asymmetric	Precocissima Morettini	3

CPVO N°	UPOV N°	Stage, Method	Characteristics	Examples	Note
37.	37.	VG	Fruit: prominence of suture		
QN		(f)	very weak		1
			very weak to weak		2
			weak	Redhaven	3
			weak to medium		4
			medium	Amsden, May Flower, Précoce de Hale	5
			medium to strong		6
			strong	Precicissima Morettini	7
			strong to very strong		8
			very strong		9
38.	38.	MS/VG	Fruit: depth of stalk cavity		
QN		(f)	very shallow		1
			very shallow		2
			Shallow	Robin	3
			shallow to medium		4
			Medium	Triumph	5
			medium to deep		6
			Deep	Southland	7
			deep to very deep		8
			very deep		9

CPVO N°	UPOV N°	Stage, Method	Characteristics	Examples	Note
39.	39.	MS/VG	Fruit: width of stalk cavity		
QN		(f)	very narrow		1
			very narrow to narrow		2
			Narrow	Redhaven	3
			narrow to medium		4
			medium	Maygrand	5
			medium to broad		6
			broad	Robin	7
			broad to very broad		8
			very broad		9
40. (+)	40. (*)	VG	Fruit: ground colour of skin		
PQ		(f)	not visible	Fiesta Red	1
			green	Ruberrina	2
			cream green	Carman	3
			greenish white	Morton	4
			cream white	Antonia, Michelini	5
			cream	Amsden	6
			pink white	Précoce de Hale	7
			greenish yellow	Veteran	8
			cream yellow	Fuzalode	9
			yellow	Sudanell	10
			orange yellow	Redtop, Victoria	11

CPVO N°	UPOV N°	Stage, Method	Characteristics	Examples	Note
41. (+)	41. (*)	VG	Fruit: relative area of over colour of skin		
QN		(f)	absent or very small	Ghiaccio 1, Veteran, Zholty	1
			very small to small		2
			small	Amsden	3
			small to medium		4
			medium	Redhaven	5
			medium to large		6
			large	Redtop	7
			large to very large		8
			very large	Rich Lady, Zaitabo	9
42.	42.	VG	Fruit: hue of over colour of skin		
PQ		(f)	orange red	Velvet	1
			pink	Genard	2
			pink red	Fuzalode	3
			light red	Redtop	4
			medium red	Red Diamond	5
			dark red	Redwing	6
			blackish red	Monec, Monid	7
43. (+)	43.	VG	Fruit: pattern of over colour of skin		
PQ		(f)	solid flush	Zaitabo	1
			mottled	Merrill Sundance	2
			striped	Velvet	3
			marbled	Grenadix 7	4
44.	44. (*)	VG	Fruit: pubescence of skin		_
QL		(f)	absent	Daisy, Fantasia, Monco, Zaitabo	1
G			present	Merspri, Moncav, Rich May	9

CPVO N°	UPOV N°	Stage, Method	Characteristics	Examples	Note
45.	45. (*)	VG	Fruit: density of pubescence of skin		
QN		(f)	very sparse	Merrill Gemfree	1
			very sparse to sparse		2
			sparse	Suncrest	3
			sparse to medium		4
			medium	Dixired	5
			medium to dense		6
			dense	Erlyvee, Veteran	7
			dense to very dense		8
			very dense	Arp Beauty, Triumph	9
46.	46.	VG	<u>Only varieties with fruit</u> <u>pubescence: absent</u> : Fruit: glossiness		
QN		(f)	absent or weak		1
			medium		2
			strong		3
47. (+)	47.	VG	<u>Only varieties with fruit</u> <u>pubescence: absent</u> : Fruit: conspicuousness of lenticels		
QN		(f)	weak	Flavortop	1
			medium	Ruby Diamond	2
			strong	Zairegem	3
48.	48.	VG	Fruit: thickness of skin		
QN		(f)	thin	Fuzalode	1
			medium	Mme Girerd	2
			thick	Carman	3

CPVO N°	UPOV N°	Stage, Method	Characteristics	Examples	Note
49.	49.	VG	Fruit: adherence of skin to flesh		
QN		(f)	very weak	Mme Girerd	1
			very weak to weak		2
			weak	Redhaven	3
			weak to medium		4
			medium	Early Sungrand	5
			medium to strong		6
			strong	Babygold 5	7
			strong to very strong		8
			very strong	Vivian	9
50.	50. (*)	MS	Fruit: firmness of flesh		
QN		(f)	very soft	Amsden, Morettini nº1, Springtime	1
			very soft to soft		2
			soft	Fairhaven	3
			soft to medium		4
			medium	Flavorcrest, Redtop	5
			medium to firm		6
			firm	Honey Blaze, Zaitabo	7
			firm to very firm		8
			very firm	Babygold 6, Ghiaccio 2	9

CPVO N°	UPOV N°	Stage, Method	Characteristics	Examples	Note
51.	51. (*)	VG	Fruit: carotenoid coloration of flesh		
PQ		(f)	greenish white	Charles Roux	1
			white	Caldesi 2000, Springtime	2
			cream white	Michelini	3
			light yellow	Armking, Spring Gold	4
			yellow	Early Sungrand	5
			orange yellow	Lovell, Merrill Franciscan	6
G			orange	Sungold	7
52.	52. (*)	VG	Fruit: anthocyanin coloration of flesh next to skin		
QL		(f)	absent	Springfire	1
			present	Sanguine Vineuse	9
53. (+)	53. (*)	VG	Fruit: intensity of anthocyanin coloration of flesh next to skin		
QN		(f)	weak	Daisy, Dolores, Monco	1
			medium	Rich May, Zairegem, Merril Franciscan	2
			strong	Monalu, Monof, Sanguine Chanas, Sanguine Vineuse	3
54.	54. (*)	VG	Fruit: anthocyanin coloration of flesh in central part of flesh		
QL		(f)	absent	Springfire	1
			present	Monof	9
55. (+)	55. (*)	VG	Fruit: intensity of anthocyanin coloration of flesh in central part of flesh		
QN		(f)	weak	Robin	1
			medium	Dolores, Monco, Suncrest	2
			strong	Monof, Zairegem	3

CPVO N°	UPOV N°	Stage, Method	Characteristics	Examples	Note
56.	56. (*)	VG	Fruit: anthocyanin coloration of flesh around stone		
QL		(f)	absent	Springfire	1
			present	Summer Lady	9
57. (+)	57. (*)	VG	Fruit: intensity of anthocyanin coloration of flesh around stone		
QN		(f)	weak	Andross, Ghiaccio 1	1
			medium	Ryans Sun	2
			strong	Summer Lady, Zaipeo	3
58. (+)	58.	VG	Fruit: flesh fibre		
QN		(f)	absent or weak	Redhaven	1
(+)			medium		2
			strong	Sunhigh	3
59. (+)	59.	MG	Fruit: sweetness		
QN		(f)	low	Alexandra, Armking, Merrill Gemfree	1
			medium	Dixired, Redhaven	2
			high	Maillardoux, Philp	3
60. (+)	60. (*)	MG	Fruit: acidity		
QN		(f)	very low	Monam, Moncav, Monna, Redwing, Zaibomi, Zaidaso	1
			low	Maillarboom, Monnude, Zaifave, Zaifuro, Zairesu, Zaitabo	2
			medium	Mercil, Monprime, Ryans Sun	3
			high	Craucail, Kraprim, Nectaross, Orion, Rich May, Zailice, Zainara	4
G			vey high	Armking, Bracid, Maycrest, Red Robin, Savana Red, Star Bright, Zaibri, Zaitop	5

CPVO N°	UPOV N°	Stage, Method	Characteristics	Examples	Note
61. (+)	61. (*)	VG	Stone: size in relation to fruit		
QN		(g)	very small		1
			very small to small		2
			small	Alex, Robin	3
			small to medium		4
			medium	Redhaven	5
			medium to large		6
			large	Somervee	7
			large to very large		8
			very large		9
62. (+)	62. (*)	VG	Stone: shape (in lateral view)		
PQ		(g)	oblate	Alex, Bailou, UFO3	1
			circular	Robin	2
			elliptic	Loring	3
			obovate	Rubidoux	4
63.	63.	VG	Stone: anthocyanin coloration		
QN		(g)	absent of very weak	Oom Sarel	1
			very weak to weak		2
			weak	Alpine	3
			weak to medium		4
			medium	Jim Dandy	5
			medium to strong		6
			strong	Margaret's Pride	7
			strong to very strong		8
			very strong	Arctic Red	9

CPVO N°	UPOV N°	Stage, Method	Characteristics	Examples	Note
64. (+)	64.	VG	Stone: intensity of brown colour		
QN		(g)	very light		1
			very light to light		2
			light	Robin	3
			light to medium		4
			medium	Alexia, Amalia, Victoria	5
			medium to dark		6
			dark	Vivian	7
			dark to very dark		8
			very dark		9
65. (+)	65.	VG	Stone: relief of surface		
PQ		(g)	only pits		1
			predominantly pits		2
			equally pits and grooves		3
			predominantly grooves		4
			only grooves		5
66.	66. (*)	VG	Stone: adherence to flesh		
QL		(g)	absent	Fairhaven, Fuzalode	1
			present	Sweet Gold, Vivian	9

CPVO N°	UPOV N°	Stage, Method	Characteristics	Examples	Note
67.	67.	VG	Stone: degree of adherence to flesh		
QN		(g)	very weak		1
			very weak to weak		2
			weak	Dixired	3
			weak to medium		4
			medium	Springcrest	5
			medium to strong		6
			strong	Vivian	7
			strong to very strong		8
			very strong		9
68. (+)	68.	MG	Time of beginning of leaf bud burst		
QN			very early	Sunred	1
			very early to early		2
			early	Springtime	3
			early to medium		4
			medium	Redhaven	5
			medium to late		6
			late	Genadix 7	7
			late to very late		8
			very late	Reine des Vergers	9

CPVO N°	UPOV N°	Stage, Method	Characteristics	Examples	Note
69. (+)	69. (*)	MG	Time of beginning of flowering		
QN			very early	Zaibop, Zaitolio	1
			very early to early		2
			early	Rich Lady, Springtime	3
			early to medium		4
			medium	Monnude, Zaitabo	5
			medium to late		6
			late	Maillarflat, Maillarlau	7
			late to very late		8
G			very late	Summerqueen	9
70. (+)	70. (*)	MG	Time of maturity		
QN			very early	Rich May, Springtime, Zaibaro	1
			very early to early	Zainoar, Zaitani	2
			early	Antonia, Redwing, Rich Lady, Robin	3
			early to medium	Craucail, Diamond Princess	4
			medium	Fairhaven, Fantasia, Summer Bright, Zee Lady	5
			medium to late	Maillarbig, Savana Red, Zaimor	6
			late	Fairlane, Flacara, Veteran, Western Red, Zailati, Zairova	7
			late to very late	Andgold, Tardibelle	8
			very late	Rubidoux	9
G			extremely late	Calante, Jesca	10

8. **EXPLANATIONS ON THE TABLE OF CHARACTERISTICS**

8.1 **Explanations covering several characteristics**

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

- a) Observations should be made during winter dormancy.
- b) Observations on the leaf should be made on fully developed leaves in the central third of a current season shoot.
- c) Observations on the nectaries (glands) should be made on leaves as soon as they are fully developed.
- d) Observations on the flowering shoot and the flower should be made in the central third of the shoot.
- Observations on the flower should be made on fully opened flowers at the beginning of anther dehiscence. e)
- f) Observations on the fruit should be made on fruit that are mature for consumption (see Ad. 70).
- g) Observations on the stone should be made on the dry stone after removal of the flesh.

Explanations for individual characteristics 8.2

Ad. 2: Tree: vigour

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

Ad. 3: Tree habit

To be observed the year before the main pruning.



fastigiate



upright



3 upright to spreading



spreading



drooping

Ad. 7: Flowering shoot: intensity of anthocyanin coloration

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

Ad. 8: Flowering shoot: density of flower buds

The density of flower buds is determined along the length of the current year's shoot.



Ad. 9: Flower: type

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

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



Ad. 10: Corolla: main colour (inner side)

The main colour is the colour with the largest area.

Ad. 11: Petal: shape



narrow ovate





narrow elliptic



4 medium elliptic



5 circular

Ad. 12: Only varieties with flower type: campanulate: Petal: width Ad. 13: Only varieties with flower type: rosette: Petal: width



Ad. 14: Flower: number of petals



five



more than five

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

Ad. 15: Stamen: position compared to petals





2 same level



Ad. 16: Stigma: position compared to anthers

To be observed on 5 flowers per tree.



Ad. 19: Stipule: length

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





Ad. 20: Leaf blade: length



Ad. 21: Leaf blade: width



Ad. 22: Leaf blade: ratio length/width







Ad. 23: Leaf blade: shape in cross section





Ad. 24: Leaf blade: margin



crenate







shallow serrate



deep serrate





Ad. 28: Leaf blade: red mid-vein on the lower side

To be observed during the period of new leaf growth.

Ad. 29: Petiole: length

To be evaluated on 5 leaves per tree.



Ad. 30: Petiole: nectaries





Ad. 31: Petiole: shape of nectaries





reniform

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







5 medium elliptic





9 present

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











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





strongly asymmetric

Ad. 40: Fruit: ground colour of skin

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

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





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

Ad. 53: Fruit: intensity of anthocyanin coloration of flesh next to skin







strong

Ad. 55: Fruit: intensity of anthocyanin coloration of flesh in central part of flesh







3 strong

Ad. 57: Fruit: intensity of anthocyanin coloration of flesh around stone







3 strong

Ad. 58: Fruit: flesh fibre

The flesh fibre is evaluated by biting into the flesh to determine the amount of fibre.

Ad. 59: Fruit: sweetness

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

Ad. 60: Fruit: acidity

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

Ad. 61: Stone: size in relation to fruit







large

Ad. 62: Stone: shape (in lateral view)



circular

3 elliptic

obovate

Ad. 64: Stone: intensity of brown colour

To be observed on fresh stones.



3 light



5 medium



dark

Ad. 65: Stone: relief of surface



pits

pits and grooves

Ad. 68: Time of beginning of leaf bud burst

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

Ad. 69: Time of beginning of flowering

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

Ad. 70: Time of maturity

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

9. LITERATURE

Bellini E., Scaramuzzi, F., 1975: Pesco. Enciclopedia agraria italiana VIII, Roma, IT.

Bellini, E., 1981: Il pesco. Cultivar. R.E.D.A., Roma, IT, pp. 9-90.

Bellini, E., Scaramuzzi, F. 1976: Monografia delle principali cultivar di pesco. Vol. II., C.N.R., Firenze, IT, 564 pp.

Blaha, J., 1966: Broskovone, merunky, mandlone (peach, apricot, almond). Ceskoslovenska Akademie VED, Praha, Czechoslovakia, 438 pp.

Brozik, S., Termesztett gyumolcsfajtaink 2. Csonthejastermesuek. Oszibarack (Fruit varieties 2., stone fruits peach)," Mezogazdasagi Kiado, Budapest, HU, 64 pp.

Caillavet, H., 1975: Variétés de pêchers. Maison de l'agriculture, Perpignan, 213 pp.

Caillavet, H., Souty, J., 1950: Monographie des principales variétés de pêcher. Société Bordelaise d'Imprimerie, Bordeaux, FR, 416 pp.

Chaparro J.X., Werner D.J., Whetten R.W. and D.M. O'Malley, 1995 : Inheritance, genetic interaction and biochemical characterization of anthocyanin phenotypes in peach. J. Hered., 86: 32-38.

Childers, N.F., 1975: The peach, varieties, culture etc. 1 Tome.

CTIFL, 2002: Les variétés de pêches et de nectarines. Ed. CTIFL, Paris, FR, 223 p.

CTIFL, 1994: Pêche, les variétés et leur conduite. Ed. CTIFL, Paris, FR, 306 p.

Fideghelli, C., Bassi, D., Bellini, E., Monastra, F., 1980: Schede per il registro varietale dei fruttiferi 2 – pesco. M.A.F.-S.O.I., Roma, IT, 104 pp.

Fideghelli, C., Monastra, F., Faedi, W., Rosati, P., 1977: Monografia di cultivar di nettarine. Ministero Agricoltura e Foreste, Roma, IT, 88 pp.

Hu D. and R. Scorza, 2009: Analysis of the 'A72' peach tree Growth Habit and its inheritance in progeny obtained from crosses of 'A72' with columnar peach trees. J. Amer. Sc. Hort. Sci. 134(2):236-243.

Hugard, J., Saunier, R., 1965: Monographie des principales variétés de pêcher. Période d'études 1950-1962, Institut national de la recherche agronomique (INRA), Paris, FR, 276 pp.

IRTA, 2002: Melocotonero, las variedades de más interés. Ed. IRTA, Barcelona, ESP, 287 p.

Ivascu, Antonia, 2003: Peach varieties catalog (catalogul soiurilor de pierfic), ed. Medro Ro, 110 p.

Layne D.R. and D. Bassi, 2008: The peach : Botany, production and uses. Ed. By Desmond R. Layne and Daniele Bassi. ISBN 978 1 84593 386 9. CABI, 30 nov. 2008 - 615 pages.

Leroy, A., 1867: Dictionnaire de pomologie. 2 Tomes Loreti, F., Fiorino, P., 1972: Monografia delle principali cultivar di nettarine. C.N.R., Pisa, IT, 340 pp.

Monet, R., 1983: Le pêcher. Génétique et physiologie. Ed. Masson, Paris, France

Monet R., Bastard Y. en Gibault B., 1988: Etude génétique du caractère « port pleureur » chez le pêcher. Agronomie, 8(2): 127-132.

Monet R. Guye A. and N. Dachary, 1996: Peach Mendelian genetics: a short review and new results. Agronomie, 16: 321-329.

Morettini, A., Baldini, E., Scaramuzzi, F., Bargioni, G., Pisani, P.L., 1972: Monografia delle principali cultivar di pesco. C.N.R., Firenze, IT, 636 pp.

Morettini, A., et al., 1967: Monografia delle principali cultivar di pesco. Consiglio nazionale delle Ricerche. Centro miglioramento piante da frutto e da orto, Firenze, IT, 633 pp.

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

Sajer O., Scorza R., Dardick C., Zhenbentyayeva T., 2012: Development of sequence-tagged site markers linked to the pillar growth type in peach (Prunus persica). Abbott A.G. and R. Horn, Plant Breeding, doi:10.1111/j.1439-0523.2011.01912.x

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

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

Scorza R., Lightner G.W. and A. Liverani, 1989: The pillar peach tree and growth habit analysis of compact x pillar progeny. J. Am. Soc. Hortic. Sci., 114: 991-995.

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

Takashi Haji, Hideaki Yaegaki, Masami Yamaguchi, 2001: Department of Breeding, National Institute of Fruit Science: Changes in Ethylene Production and Flesh Firmness of Melting, Nonmelting and Stony hard in Peaches after Harvest: J. Japan. Soc. Hort. Sci 70(4): 458-459.

Takashi Haji, Hideaki Yaegaki, Masami Yamaguchi, 2005: Department of Breeding, National Institute of Fruit Science: Inheritance and expression of fruit texture melting, non-melting and stony hard in peach. Scientia Horticulture 105. 241-248.

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

Werner R.W. Creller M.A. and J.X. Chaparro, 2005: Inheritance of the blood-flesh trait in peach. Hortscience, 33(7): 1243-1246.

Werner R.W. and Chaparro J.X., 2005: Genetic interactions between pillar and weeping peach genotypes. Hortscience 40(1): 18-20.

10. TECHNICAL QUESTIONNAIRE

The Technical Questionnaire is available on the <u>CPVO website</u> under the following reference: CPVO/TQ-053/2-Rev.2 - *Prunus persica* (L.) Batsch.

Link to the e-TQ:

https://online.plantvarieties.eu/backOfficeFormQuestions?viewFormId=15296&viewFormType=TQ&viewFormLang=E N&speciesIds=PRU11&status=1,2&order=formName