



PEACH DESCRIPTORS

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INTERNATIONAL BOARD FOR PLANT GENETIC RESOURCES

COMMISSION OF EUROPEAN COMMUNITIES: COMMITTEE ON
DISEASE RESISTANCE BREEDING AND USE OF GENE BANKS

DESCRIPTOR LIST FOR PEACH (Prunus persica)

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In 1974 the Council of Ministers of the European Communities established a Standing Committee on Agricultural Research to advise the Commission on a programme of Agricultural Research.

The first programme started in 1975, while a second programme was launched in 1979 for the five year period 1979-1983.

The Standing Committee on Agricultural Research has advised the Commission on both programmes. Within this framework a programme on resistance breeding and use of genebanks has been set-up as one of 10 subjects. This programme (with a limited budget) is managed by a programme committee in which the ten member countries are represented by their nominees, one per country. The programme committee started work in 1978 by selecting priorities for crops and subjects. Several working groups have been set-up to prepare descriptor lists as a basis for future work.

CEC - Programme Committee on Disease Resistance Breeding and Use of Gene Banks
Second Programme on Agricultural Research of the CEC

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The International Board for Plant Genetic Resources (IBPGR) is an autonomous international scientific organization under the aegis of the Consultative Group on International Agricultural Research (CGIAR). The IBPGR was established by the CGIAR in 1974 and its Executive Secretariat is provided by the Food and Agriculture Organization of the United Nations. The basic function of the IBPGR is to promote and coordinate an international network of genetic resources centres to further the collection, conservation, documentation, evaluation and use of plant germplasm and thereby contribute to raising the standard of living and welfare of people throughout the world. The Consultative Group mobilizes financial support from its members to meet the budgetary requirements of the Board.

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PREFACE

The peach descriptor list was initiated and developed with full support from the Commission of the European Communities (CEC) Programme Committee for Plant Disease Resistance Breeding and the Use of Genebanks. The Prunus Working Group from the European Cooperative Programme for Conservation and Exchange of Crop Genetic Resources, Phase II, recognized the need for IBPGR to integrate its work on descriptors with all European countries. Therefore this descriptor list has been prepared to the IBPGR standard format following advice on descriptors and descriptor states from the crop experts throughout the world (see Appendix II). The IBPGR encourages the collection of data on the first four categories of this list; 1. Accession; 2. Collection; 3. and 4. Characterization and Preliminary evaluation. The IBPGR endorses the information in categories 1 - 4 as the minimum that ideally should be available for any one accession. Other descriptors are given in categories 5 onwards that will enable the simple encoding of further characterization and evaluation data and which can serve as examples for the creation of additional descriptors in the IBPGR form by any user.

The suggested coding should not be regarded as the definitive scheme, although this format has the full backing of the IBPGR and is promoted worldwide. The descriptor list given here provides an international format and thereby produces a universally understood 'language' for all plant genetic resources data. The adoption of this scheme for all data encoding, or at least the production of a transformation method to convert other schemes to the IBPGR format, will produce a rapid, reliable and efficient means for information storage, retrieval and communication. This will greatly assist the utilization of germplasm throughout the international plant genetic resources network. It is recommended, therefore, that information should be produced by closely following this descriptor list with regard to: ordering and numbering descriptors; using the descriptors specified; and using the descriptor states recommended.

Errors and omissions are the responsibility of the editors. Any suggestions for modifications will be welcomed by the IBPGR Secretariat, Rome, and by the editors, especially before encoding new descriptors.

DESCRIPTOR LIST FOR PEACH

The IBPGR now uses the following definitions in genetic resources documentation:

- i) passport data (accession identifiers and information recorded by collectors);
- ii) characterization (consists of recording those characters which are highly heritable, can be easily seen by the eye and are expressed in all environments);
- iii) preliminary evaluation (consists of recording a limited number of additional traits thought desirable by a consensus of users of the particular crop).

Characterization and preliminary evaluation will normally be the responsibility of the curators, while further characterization and evaluation should be carried out by the plant breeder. The data from further evaluation should be fed back to the crop coordinator who will maintain a data file.

The following internationally accepted standards for the scoring or coding of descriptor states should be followed as indicated below:

- a) measurements are made in metric units;
- b) many descriptors which are continuously variable are recorded on a 1-9 scale. The authors of this list have sometimes described only a selection of the states, e.g. 3, 5 and 7 for such descriptors. Where this has occurred the full range of codes is available for use by extension of the codes given or by interpolation between them - e.g. in 8. (Pest and disease susceptibility) 1 = extremely low susceptibility and 8 = high to extremely high susceptibility;
- c) presence/absence of characters are scored as + (present) and 0 (absent);
- d) for descriptors which are not generally uniform throughout the accession (e.g. mixed collection, genetic segregation) mean and standard deviation could be reported where the descriptor is continuous or mean and 'x' where the descriptor is discontinuous (frequencies can be recorded in NOTES descriptor, 11);

- e) when the descriptor is inapplicable, '0' is used as the descriptor value. For example, if an accession does not form flowers, a '0' would be scored for the following descriptor

Flower colour

1	White
2	Yellow
3	Red
4	Purple

- f) blanks are used, for information not yet available;
- g) standard colour charts e.g. Royal Horticultural Society Colour Chart, Methuen Handbook of Colour, Munsell Color Charts for Plant Tissues are strongly recommended for all ungraded colour characters. The precise chart used should be specified in the NOTES descriptor, 11.

For the observations on the fruit, 10 typical fruits should be selected out of a minimum of 20 from two trees. All observations on the fruits should be made on fruits ripened on the tree.

PASSPORT

1. ACCESSION DATA

INTRODUCTORY

1.1 ACCESSION NUMBER

This number serves as a unique identifier for an accession at a given site and is assigned by the curator of a particular genebank site when an accession is entered into the site genebank. It must not be re-used even if the accession is lost. Letters should occur before the number to identify the genebank or national system (e.g. PI indicates an accession within the USA system, and EC indicates an accession within the CEC Fruit Genetic Resources Scheme). A site may choose to use a Genetic Resource Scheme (GRS) ACCESSION NUMBER (see 1.4) as the only unique identifier.

1.2 DONOR NAME (= Source of acquisition)

The name and address of the person or institute responsible for donating the germplasm to the genebank collection at the site (see 1.13) at which the plants are held

1.3 DONOR IDENTIFICATION NUMBER

The number (or name) assigned by the person or institute above (1.2) donating the accession to the site specified at 1.14

1.4 OTHER NUMBERS ASSOCIATED WITH THE ACCESSION (see also 1.18 and 2.1)

Other identification number known to exist in other collections for this accession, e.g. CEC Genetic Resources Scheme* (EC) number or United States Plant Inventory (PI) number. EC and PI numbers serve as unique identifiers for an accession in a particular GRS, and must not be re-used; they are assigned by the EC or PI coordinator, and not by the site curator

1.4.1 *EC number (CEC GRS accession number)

1.4.2 PI number (United States Plant Inventory accession number)

1.4.3 etc.

* Basic EC Peach Descriptors

1.5 SCIENTIFIC NAME (Use Prunus persica for the cultivated peach)

1.5.1 *Genus (e.g. Prunus)

1.5.2 *Species (e.g. persica)

1.5.3 *Subspecies [(if applicable) e.g. nucipersica (for Nectarine)]

1.5.4 Bot. var. (if applicable)

For complex hybrids refer to 1.12

1.6 PEDIGREE OF ACCESSIONS

1.6.1 *Female parent (of the accession)

1.6.2 *Male parent (of the accession)

1.6.3 Mother of female parent

1.6.4 Father of female parent

1.6.5 Mother of male parent

1.6.6 Father of male parent

1.6.7 Nomenclature and designations

Identities and additional pedigree assigned to breeder's material

1.7 ACQUISITION DATE

The month and year in which the accession entered the collection, expressed numerically, e.g. June = 06, 1981 = 1981

1.7.1 Month

1.7.2 Year

1.8 DATE OF LAST REGENERATION OR MULTIPLICATION

The month and year expressed numerically, e.g. October = 10, 1978 = 1978

1.8.1 Month

1.8.2 Year

1.9 ACCESSION SIZE

Approximate number of seeds or plants of accession in collection

1.10 NUMBER OF TIMES ACCESSION REGENERATED

Number of regenerations or multiplications since original collection

1.11 TYPE OF MAINTENANCE

- 1 Vegetative
- 2 Seed
- 3 Pollen
- 4 Tissue culture
- 5 More than one type (specify in NOTES descriptor, 11)

1.12 GENETIC ORIGIN

- 1 Self pollination
- 2 Intraspecific hybrid
- 3 Interspecific hybrid
- 4 Clonal selection
- 5 Bud spontaneous mutation
- 6 Bud induced mutation
- 7 Open pollination
- 8. Etc.

Specify further information on complex hybrids in the NOTES descriptor, 11.

SITE SPECIFIC

1.13 *COUNTRY WHERE MAINTAINED

Code letters for country in which plants are grown. Use the three letter abbreviations supported by the Statistical Office of the United Nations. Copies of the abbreviations are available from the IBPGR Secretariat and have been published in the FAO/IBPGR Plant Genetic Resources Newsletter No. 49

e.g. GRC Greece
USA United States of America

1.14 *SITE WHERE MAINTAINED

Institute at which plants are grown. (If codes are used they must be unique for a particular country and, to avoid duplication, should be communicated to IBPGR).

e.g. ANGS Station de Recherches d'Arboriculture Fruitière,
Angers

EMRS East Malling Research Station, Kent

FRNZ Istituto di Coltivazioni Arboree, Firenze

1.15 CURATOR

The officer responsible for maintaining the genetic resources material held at the site specified above

1.16 *LOCAL NAME

The name by which the cultivar or species is listed at the above site. This may be either some combination of the Genetic Identifiers (1.22 and 1.23) or a synonym

1.17 *LOCAL CLONE/MUTANT/VARIANT NAME

The clone or mutant name of the cultivar or species (if any) by which it is identified at the above site. This may be either the internationally accepted name (1.23) or a synonym

1.18 LOCAL PLANT NUMBER

This identifies a single plant within a population of plants having the same site accession number. It may be any combination of plot identity, row number, and tree position within the row

1.19 DISTRIBUTION

1 Unlimited
2 Limited - (specify restrictions in the NOTES descriptor, 11).

1.20 *YEAR OF PROBABLE DISCARD

Enter year that tree(s) will probably be discarded, e.g. 1988. Regeneration of genebank accessions should take place at least two years before the year of probable discard.

1.21 YEAR TREE PLANTED (e.g. 1972)

FURTHER IDENTIFIERS

1.22 *GENETIC NAME

The name of the cultivar or species as internationally accepted or defined by the Genetic Resources Scheme coordinator e.g. Redhaven

1.23 *GRS CLONE/MUTANT/VARIANT NAME

The internationally accepted name (if any) of the clone or mutant of the cultivar or species, e.g. Early Redhaven, Compact Redhaven.

1.24 PATENT NUMBER (or Plants Variety Rights Number)

Patented cultivars - record the patent number or, if the patent number is not known write '+'

Non-patented cultivars - record as '0'

1.25 SYNONYMS

Other useful names (excluding those occurring above) in alphabetical order

2. COLLECTION DATA

2.1 COLLECTOR'S NUMBER

Original number assigned by collector of the sample, normally composed of the name or initials of the collector(s) followed by a number. This item is essential for identifying duplicates held in different collections and should always accompany sub-samples wherever they are sent

2.2 COLLECTING INSTITUTE

Institute or person collecting/sponsoring the original sample

2.3 DATE OF COLLECTION OF ORIGINAL SAMPLE

Expressed numerically, e.g. March = 03, 1980 = 1980

2.3.1 Month

2.3.2 Year

2.4 *COUNTRY OF COLLECTION OR COUNTRY WHERE CULTIVAR/VARIETY BRED (=Origin)

Use the three letter abbreviations supported by the Statistical Office of the United Nations. (see 1.13)

2.5 PROVINCE/STATE

Name of the administrative subdivision of the country in which the sample was collected

2.6 LOCATION OF COLLECTION SITE

2.6.1. Collected in the wild

Number of kilometres and direction from nearest town, village or map grid reference (e.g. IZMIR7S means 7 km south of Izmir)

2.6.2 Postal address

For material originating at a clearly identifiable postal address

2.7 LATITUDE OF COLLECTION SITE

Degrees and minutes followed by N (North) or S (South), e.g. 1030S

2.8 LONGITUDE OF COLLECTION SITE

Degrees and minutes followed by E (East) or W (West), e.g. 7625W

2.9 ALTITUDE OF COLLECTION SITE

Elevation above sea level in metres

2.10 COLLECTION SOURCE

- 1 Wild
- 2 Farm land
- 3 Farm store
- 4 Backyard
- 5 Village market
- 6 Commercial market
- 7 Institute
- 8 Other (specify in the NOTES descriptor, 11)

2.11 STATUS OF SAMPLE

- 1 Wild
- 2 Weedy
- 3 Breeders' line
- 4 Primitive cultivar (landrace)
- 5 Advanced cultivar (bred)
- 6 Other (specify in the NOTES descriptor, 11)

2.12 LOCAL/VERNACULAR NAME

Name given by farmer to cultivar/landrace/weed

2.13 NUMBER OF PLANTS SAMPLED

Approximate number of plants collected (sampled) in the field to produce this accession

2.14 PHOTOGRAPH

Was a photograph taken of the accession or environment at collection?

0 = No
+ = Yes

2.15 HERBARIUM SPECIMEN

0 = No
+ = Yes

2.16 TYPE OF SAMPLE

- 1 Vegetative
- 2 Seed
- 3 Both

2.17 NATURE OF VEGETATIVE SAMPLE

- 1 Cuttings - for grafting
- 2 Cuttings - for rooting
- 3 Rooted plants
- 4 Tissue culture
- 5 Other (specify in the NOTES descriptor, 11)

2.18 *VIRUS DISEASE STATUS (including mycoplasma)

- 1 Virus disease free; specify viruses known to be absent in the NOTES descriptor, 11 and year of last virus test
- 2 Virus disease present; specify viruses present in the NOTES descriptor, 11 and year of last virus test
- 3 Not tested
- 4 Virus free by treatment

2.19 *END USE, GENERAL

- 1 Fruit use
- 2 Plant use
- 3 Both

2.20 *FRUIT USE

- 1 Scion cultivar - dessert
- 2 Scion cultivar - processing including distilling
- 3 Dual or multipurpose consumption
- 4 Other (specify in the NOTES descriptor, 11)

2.21 *PLANT USE

- 1 Clonal rootstock
- 2 Clonal interstock
- 3 Seedling rootstock
- 4 Ornamental/pollinator
- 5 Dual or multipurpose use
- 6 Botanical (wild) species
- 7 Other (specify in the NOTES descriptor, 11)

2.22 OTHER NOTES FROM COLLECTOR

Collectors should record ecological/climatic information. For cultivated crops, cultivation practices should be recorded

CHARACTERIZATION AND PRELIMINARY EVALUATION DATA

3. SITE DATA

3.1 COUNTRY OF CHARACTERIZATION AND PRELIMINARY EVALUATION

See 1.13 for coding procedure

3.2 SITE (RESEARCH INSTITUTE)

See 1.14 for coding procedure

3.3 NAME OF PERSON IN CHARGE OF CHARACTERIZATION

3.4 ROOTSTOCK

Name of rootstock on which accession is grafted (if any)

3.5 CONDITION OF TREE

Choose the one condition that best fits the accession

- 1 Dying
- 2 Old - declining
- 3 Mature - diseased
- 4 Mature - non-vigorous
- 5 Mature - vigorous
- 6 Young - not yet bearing
- 7 Healthy - cropping poorly
- 8 Healthy - cropping well

3.6 CROPPING

A preliminary measurement of "Cropping efficiency" (descriptor 6.2.3)

- 3 Cropping poorly
- 5 Intermediate
- 7 Cropping well

4. PLANT DATA

4.1 VEGETATIVE

4.1.1 *Propagation method

Suitable method(s) employed for multiplication (0 = No, + = Yes)

- 4.1.1.1 Grafting (including budding)
- 4.1.1.2 Hardwood cuttings
- 4.1.1.3 Softwood cuttings
- 4.1.1.4 Stool beds
- 4.1.1.5 Layering
- 4.1.1.6 Micropropagation
- 4.1.1.7 Seed
- 4.1.1.8 Etc.

4.1.2 *Chromosome number

4.2 INFLORESCENCE AND FRUIT

4.2.1 *Season of flowering

Date of beginning of flowering

		<u>Reference</u>
1	Extremely early	Maravilha, Sunred
2	Very early	Tejon, Sunlight
3	Early	Springtime, Armkig
4	Early/intermediate	Flavorcrest, Maria Laura
5	Intermediate	Redhaven, Maria Aurelia
6	Intermediate/late	Cresthaven, Nectared 4
7	Late	Fillette, Nectared 6
8	Very late	Summerqueen, Golden State
9	Extremely late	Buttercup

4.2.2 *Harvest maturity

Season of maturity for picking. When available, average maturity in terms of days post-blossom can be recorded in the NOTES descriptor, 11

Reference

1	Extremely early	
2	Very early	Earlycrest, May Belle
3	Early	Springcrest, Armking
4	Early/mid season	Cardinal, May Grand
5	Mid-season	Flavorcrest, Maria Laura
6	Mid season/late	Suncrest, Flavortop
7	Late	Fayette, Bob Grand
8	Very late	Fairtime, Honey Gold
9	Extremely late	Della China

4.2.3 *Flower type (shape)

Reference

1	Rosaceous	Flavorcrest, Maria Laura
2	Campanulate	Springtime, Armking

4.2.4 *Skin pubescence

Reference

0	Absent	All nectarine cultivars
3	Poor	Flavorcrest
5	Intermediate	Redhaven
7	High	Trionfo

4.2.5 *Flesh colour

Reference

1	White-greenish	Amsden, Morton
2	White	Springtime, Silver Lode
3	White-cream	Maria Bianca, Snow Queen
4	Yellow-greenish	Vesuvio, Armking
5	Yellow	Maria Serena, Maria Laura
6	Yellow-orange	Babygold 6, Maria Aurelia
7	Yellow-red	Pillar,
8	Red	Vinosa Henry de Monicourt Sanguigna, Blood Fleshed

FURTHER CHARACTERIZATION AND EVALUATION

5. SITE DATA

5.1 COUNTRY OF FURTHER CHARACTERIZATION AND EVALUATION

See 1.13 for code

5.2 SITE (RESEARCH INSTITUTE)

See 1.14 for code

5.3 NAME OF PERSON IN CHARGE OF EVALUATION

5.4 ROOTSTOCK

Name of the rootstock on which the accession is grafted (if any)

6. PLANT DATA

6.1 VEGETATIVE

SCIONS GRAFTED ON ROOTSTOCKS OR SELF-ROOTED

6.1.1 Tree habit (of branches)

Natural habit of an untrained, non-juvenile tree

		<u>Reference</u>
1	Extremely upright	Pillar
3	Upright	Fairhaven, Maria Laura
5	Spreading	Elbertita
7	Drooping	Redhaven Compact
9	Weeping	Bianco Pendulo

6.1.2 Tree vigour

Based on height and spread measurements of adult trees on their own roots, or relative to reference cultivars on the same rootstock (use reference cultivars or species on a common rootstock for each site)

		<u>Reference</u>
3	Weak	Richhaven, Maria Aurelia
5	Intermediate	Redhaven, Maria Laura
7	Strong	Fairtime, Independence
9	Extremely strong	Superba, Sunred

6.1.3 *Tree chilling requirement

Additional information concerning the method used to measure this character must be recorded in the NOTES descriptor, 11

Reference

1	Extremely low requirement	Maravilha, Sunred
3	Low requirement	Tejon, Sunlite
5	Medium requirement	Armgold, Armqueen
7	High requirement	Redhaven, Philip
9	Extremely high requirement	May Flower, Fuzzless Berta

6.1.4 Leaf colour

Reference

1	Green	Redhaven, Siberian C
2	Red	Rutgers Red Leaf, Rubira

6.1.5 *Petiole gland shape (Nectaries)

Reference

0	Absent	Tejon, Galopin
1	Reniform	Redhaven, May Grand
2	Globose (Round)	Harbrite, Freedom

ROOTSTOCKS

6.1.6 Dwarfing

Direct growth controlling effect of the rootstock on the cultivar

Reference

1	Extremely invigorating	
2	Very invigorating	GF 677
3	Invigorating	Rancho Resistant
4	Fairly invigorating	ICAPI P.S. A6
5	Intermediate	ICAPI P.S. A5
6	Semi-dwarfing	Siberian C
7	Dwarfing	
9	Extremely dwarfing	

6.1.7 Yield efficiency

A high yield efficiency is defined as the induction in the scion of a high yield of fruit relative to the cross sectional area of the trunk

Reference

3	Poor	GF 305
5	Intermediate	Rutgers Red Leaf
7	Good	ICAPI P.S.A5
9	Extremely good	Siberian C

6.1.8 Best method of propagation

Reference

1	Hardwood cuttings	
2	Softwood cuttings	
3	Stool beds	
4	Layering	
5	Micropropagation	GF 677
6	Seed	ICAPI P.S. A5, etc.
7	Easily propagated by more than one method (specify in the NOTES descriptor, 11)	
8	Other (specify in the NOTES descriptor, 11)	

6.2 INFLORESCENCE AND FRUIT

SCIONS GRAFTED ON ROOTSTOCKS OR SELF-ROOTED

6.2.1 Flower size

Reference

1	Extremely small	Cotogna del Berti, Armking
3	Small	Redhaven, Stark Sunglo
5	Intermediate	Burrona di Rosano, Morton
7	Large	Dixiland, Armred
9	Extremely large	Carson, Angelo Marzocchella

6.2.2 Anthers/pollen

Reference

0	Absent	J.H. Hale, Ruby Gold
+	Present	Most varieties

6.2.3 Cropping efficiency (Productivity)

The yield per unit area of land relative to other cultivar on the same rootstock, under the same management system and at the same site

Reference

1	Extremely low	Red Bird, Ruby Gold
3	Low	J.H. Hale, Tom Grand
5	Intermediate	Sunhigh, May Grand
7	Very high	Morettini 1, Maria Emilia
9	Extremely high	Redhaven, Maria Aurelia

6.2.4 *Fruit size

Average weight of fruits. Information on the uniformity of size can be recorded in the NOTES descriptors, 11

Reference

1	Extremely small	Royal April, Mayred,
3	Small	Springtime, Red June
5	Intermediate	Springcrest, Maria Emilia
7	Large	Redlop, Maria Laura
9	Extremely large	Maria Bianca, Maria Aurelia

6.2.5 *Fruit shape (in profile view)

See shape outlines in Figure 1

Reference

1	Very flat	Platicarpa
2	Slightly flat	Robin, Giuglianese
3	Rounded	Springcrest, Spring Red
4	Ovate	Royal Gold, Maria Laura
5	Oblong	Elberta, Flavortop
6	Elongated	Chinese cv., e.g. Mian-shian-wujueh- ban-tao

6.2.6 Fruit attractiveness

This is a subjective factor, varying between regions and between experts

Reference

1	Extremely poor	Marcus, Galopin
3	Poor	Fillette, Nectared 3
5	Fair	J.H. Hale, Independence
7	Good	Redhaven, Maria Aurelia
9	Excellent	Flavorcrest, Maria Emilia

6.2.7 Ground colour

Ground colour of the skin of fully mature fruit

Reference

1	Green	Ruberrima, Tom Grand
2	Greenish-cream	Springtime, Morton
3	Cream	Maria Bianca, Snow Queen
4	Cream-yellow	J.H. Hale, Honey Gold
5	Yellow	Maria Serena, Lola
6	Orange-yellow	Redtop, Maria Aurelia

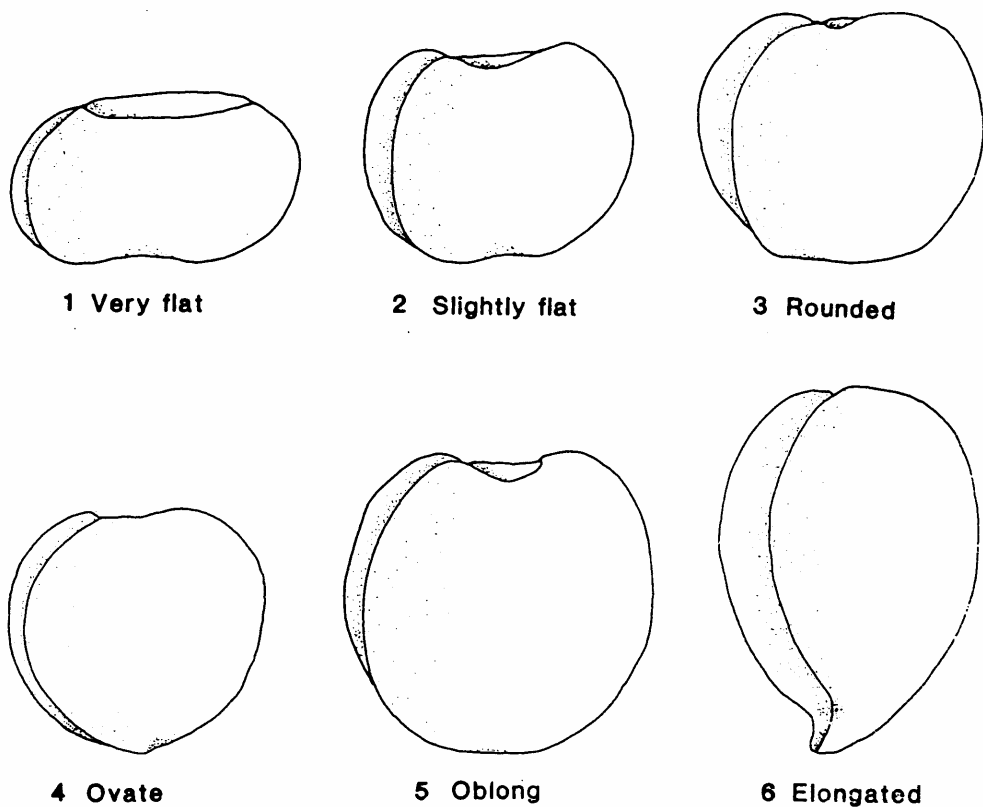


Figure 1. Fruit shape (in profile view)

6.2.8 Red over colour (Blush)

Over colour of the skin of fully mature fruit. Additional information can be recorded in the NOTES descriptor, 11

Reference

0	No red over colour	Maria Serena
1	None to red-trace	Della China, Lola
2	Red-trace	Carnival, Fairlane
3	Red-striped	Cherryred, Armking
4	Red-mottled	Raritan Rose, MayBelle
5	Partly-red	J.H. Hale, Le Grand
6	Medium-red	Redhaven, Fantasia
7	Mostly-red	Springcrest, Summer Grand
8	Full-red	Flavorcrest, Maria Emilia
9	Red-wine	Sanguigna, Blood Fleshed

6.2.9 Skin cracking susceptibility

		<u>Reference</u>
1	Extremely low	Maria Emilia
3	Low	Armking
5	Medium	Cherokee
7	High	Lexington
9	Extremely high	Stark Earliblaze

6.2.10 Firmness of flesh

		<u>Reference</u>
1	Extremely soft	Uneeda, Morton
3	Soft	Amsden, Mayred
5	Medium	Robin, Armking
7	Firm	Springcrest, Maria Emilia
9	Extremely firm	Flavorcrest, Maria Aurelia

6.2.11 Texture of flesh

The texture of the flesh of the fruit when ripe

		<u>Reference</u>
3	Coarse	Marcus, Flamekist
5	Intermediate	Sunhigh, Independence
7	Fine	Redhaven, Maria Aurelia

6.2.12 Eating quality

A combined assessment of flavour, acidity, sweetness, aroma and astringency at optimum eating time

		<u>Reference</u>
1	Extremely poor	Tejon, Golden State
3	Poor	Marcus, Nectared 3
5	Fair	Redhaven, Independence
7	Good	Flavorcrest, Maria Aurelia
9	Excellent	Maria Bianca, Flavortop

6.3 STONE

6.3.1 Stone size

		<u>Reference</u>
1	Extremely small	Royal Gold, Honey Gold
3	Small	Armgold, Silver Lode
5	Medium	Redhaven, May Grand
7	Large	Crcsthaven, Fantasia
9	Extremely large	Dixiland, Fairlane

6.3.2 Stone shape (in profile view)

See shape outlines in Figure 2

Reference

1	Flat	Platicarpa
2	Rounded	Royal Gold, Panamint
3	Ovoid	Regina, John Rivers
4	Elongated	Fairtime, May Grand
5	Very elongated	Chinese cv., e.g. Gaoling-da-hung- pao-tao

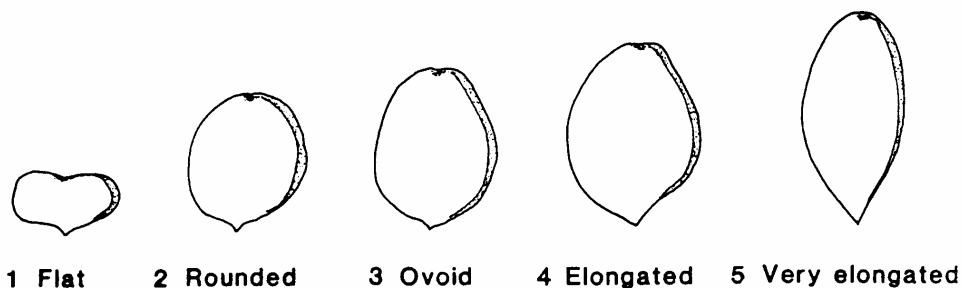


Figure 2. Stone shape (in profile view)

6.3.3 *Stone adherence to flesh of fully ripe fruit

Reference

1	Freestone	Elberta, Maria Aurelia
2	Semi-freestone	Cardinal, Maria Emilia
3	Clingstone	Andross, Fairlane

6.3.4 Split stone

Percentage of ripe fruit with split stones

Reference

1	Extremely low	Flavorcrest, Maria Aurelia
3	Low	Dixired, John Rivers
5	Medium	Springold, Armking
7	High	Earlired, Firebrite
9	Extremely high	Marcus, Mayred

7. STRESS SUSCEPTIBILITY

Based on the 1-9 scale, where

- 1 Extremely low susceptibility
- 3 Low susceptibility
- 5 Moderate susceptibility
- 7 High susceptibility
- 9 Extremely high susceptibility

7.1 LOW TEMPERATURE

Additional information concerning type of susceptibility can be recorded in the NOTES descriptor, 11; i.e. minimum temperature without damage, differences in bud and wood susceptibility, etc.

7.1.1 Low temperature - winter

On dormant flower buds

		<u>Reference</u>
1	Extremely hardy	Reliance
3	Hardy	Redhaven
5	Moderate	Canadian Harmony
7	Tender	Loring
9	Extremely tender	Redglobe

7.1.2 Low temperature - spring

On open blossoms to spring frost

		<u>Reference</u>
1	Extremely hardy	Siberian C
3	Hardy	Cardinal
5	Moderate	Elberta
7	Tender	Jefferson
9	Extremely tender	Eryvee

7.2 HIGH TEMPERATURE

7.3 DROUGHT

7.4 HIGH SOIL MOISTURE

7.5 CHLOROSIS

Induced by high lime content of the soil

		<u>Reference</u>
1	Extremely low susceptibility	
3	Low susceptibility	GF 677
5	Moderate susceptibility	GF 557
7	High susceptibility	Commercial seedlings
9	Extremely high susceptibility	Nemaguard

8. PEST AND DISEASE SUSCEPTIBILITY

Based on a 1-9 scale of general field susceptibility where

- 3 Low susceptibility
- 5 Medium susceptibility
- 7 High susceptibility

(If the race is known, record in the NOTES descriptor, 11)

8.1 PESTS

- 8.1.1 Anarsia lineatella peach twig-borer
- 8.1.2 Ceratitis capitata peach maggot
- 8.1.3 Cydya molesta oriental peach moth
- 8.1.4 Myzus persicae peach aphid
- 8.1.5 Quadraspidiotus perniciosus S. Jose scale
- 8.1.6 etc.

8.2 FUNGI

- 8.2.1 Monilia laxa (M. fructigena) brown-rot
Reference
 - 1 Harrow Blood
 - 3 Loring, Harken, Harbrite
 - 5 Hardired, Harko
 - 7 Babygold 6, Nectared 3
 - 9 Stark Earliblaze
- 8.2.2 Sphaerotheca pannosa powdery mildew of peach
Reference
 - 1 Armgold
 - 3 Redhaven, Early Sungrand
 - 5 Elberta, Panamint
 - 7 Robin, Fuzzless Berta
 - 9 Tejon, Bailey
- 8.2.3 Cladosporium carpophilum peach scab
- 8.2.4 Coryneum beijerinckii shot-hole
- 8.2.5 Cytospora spp. canker
- 8.2.6 Fusicoccum amygdali black canker
- 8.2.7 Stereum purpureum silver blight
- 8.2.8 Taphrina deformans peach leaf-curl
- 8.2.9 Verticillium albo-atrum peach wilt

8.2.10 etc.

8.3 BACTERIA

8.3.1 Erwinia tumefaciens crown gall
(Agrobacterium)

8.3.2 Pseudomonas mors-prunorum f. persicae

8.3.3 Xanthomonas pruni black spot

8.3.4 etc.

8.4 VIRUS AND MYCOPLASMA

8.4.1 Peach mosaic virus

8.4.2 Peach rosette mosaic virus

8.4.3 Prunus dwarf virus

8.4.4 Prunus ring spot virus

8.4.5 Peach X disease mycoplasma

8.4.6 etc.

8.5 NEMATODES

8.5.1 Meloidogyne spp.

8.5.1.1 Meloidogyne incognita

8.5.1.2 etc.

8.5.2 Pratylenchus spp.

8.5.2.1 Pratylenchus vulnus

8.5.2.2 etc.

8.5.3 etc.

8.6 PHYSIOLOGICAL DISORDERS

8.6.1 etc.

9. ALLOENZYME COMPOSITION

These may prove to be useful tools for identifying duplicate accessions

10. CYTOLOGICAL CHARACTERS AND IDENTIFIED GENES

11. *NOTES

Give additional information where descriptor state is noted as "Other" as might appear in descriptors (e.g. 2.10, 4.2.2, 6.1.8, etc.). Also include here further relevant information (where necessary)

SUMMARY OF BASIC CEC PEACH DESCRIPTORS

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