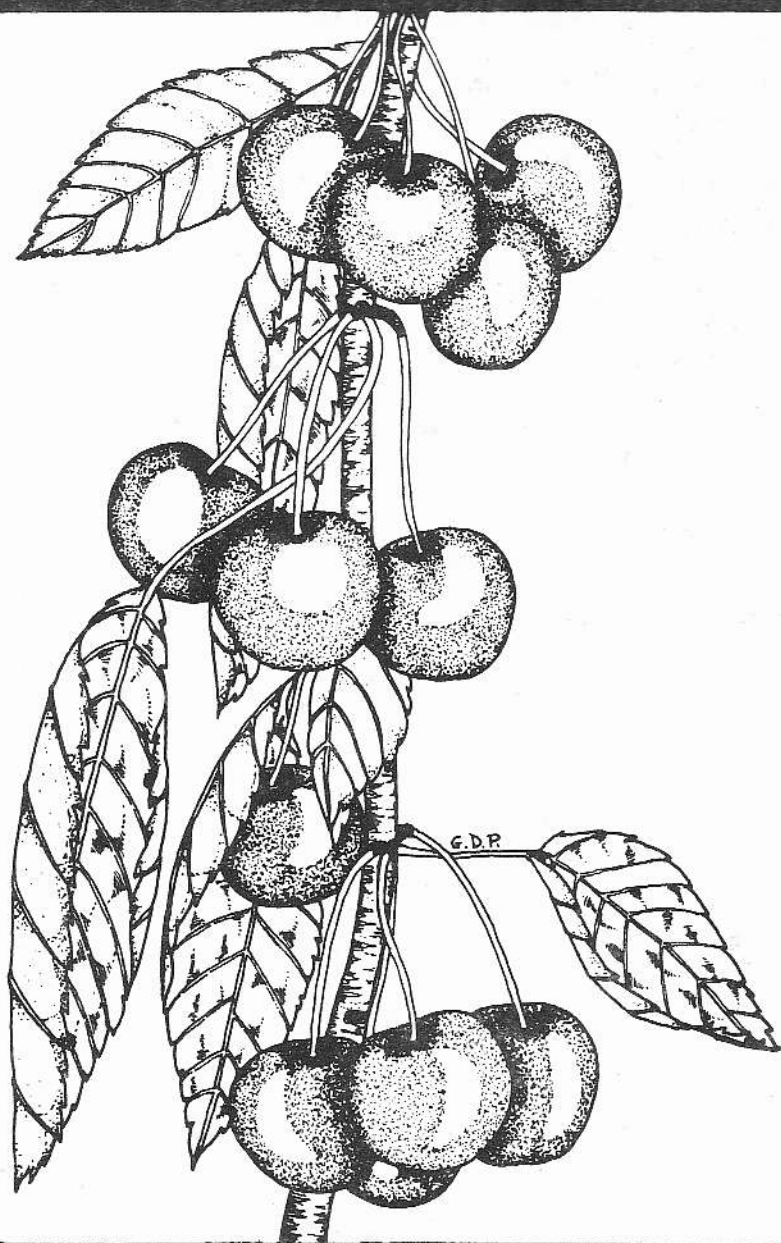




CHERRY DESCRIPTORS

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INTERNATIONAL BOARD FOR PLANT GENETIC RESOURCES

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

CHERRY DESCRIPTOR LIST

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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 cherry 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 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.

The number used by Union internationale pour la Protection des Obtentions Végétales (UPOV) is included as a cross-reference for descriptors which are also UPOV characters.

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 CHERRY

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

- i) passport (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 the 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, 20 typical fruits should be selected out of a minimum of 40 from two trees. The fruits should be examined at peak maturity.

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 1.14) 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 numbers 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 cherry descriptors (see Appendix I, p. 29)

1.5 SCIENTIFIC NAME

1.5.1 * Genus (Prunus)

1.5.2 * Species (e.g. avium)

1.5.3 * Subspecies (if applicable)

1.5.4 * Group (e.g. sweet, sour or duke cherry)

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 the 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 Fruitières,
 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 STATUS

- 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. 1989. 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 Resource Scheme coordinator, e.g. Hedelfinger

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. Compact Lambert

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. IZMIR 7S 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 Breeder's 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 and year of last virus test, in the NOTES descriptor, 11)
- 2 Virus disease present (specify viruses present and year of last virus test, in the NOTES descriptor, 11)
- 3 Not tested

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 in the NOTES descriptor, 11

CHARACTERIZATION AND PRELIMINARY EVALUATION

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

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 * Ease of propagation

Reference in Table 1

- 4.1.2.1 Hardwood cuttings
- 4.1.2.2 Softwood cuttings
- 4.1.2.3 Stool beds
- 4.1.2.4 Layering
- 4.1.2.5 Micropropagation

Table 1. Reference varieties for ease of propagation (4.1.2)

		4.1.2.1	4.1.2.2	4.1.2.3	4.1.2.4	4.1.2.5
		Hardwood cuttings	Softwood cuttings	Stool beds	Layering	Micro-propagation
3	Poor	F 12/1	F 12/1	F 12/1		
5	Intermediate				F 12/1	
7	Good	Colt	Weiroots			F 12/1 Weiroots

4.1.3 * Chromosome number

4.1.4 * Dwarfing

Direct growth-controlling effect of the accession as a rootstock or interstock on cultivars

Reference

- 1 Extremely invigorating
 - 2 Very invigorating
 - 3 Invigorating
 - 5 Intermediate
 - 7 Dwarfing
 - 9 Extremely dwarfing
- Most Mazzard seedlings,
SL 64
- Colt
Weiroots

4.1.5 * Induction of precocious bearing scions

In relation to F 12/1 rootstocks

		<u>Reference</u>
3	Poor	F 12/1
5	Intermediate	Colt
7	Good	Weiroots, Oblacinska

4.2 INFLORESCENCE AND FRUIT

4.2.1 Incompatibility group

Give number of incompatibility group and S allele constitution

4.2.2 * Harvest maturity (UPOV 31)

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

		<u>Reference sweet cherries</u>	<u>Reference sour cherries</u>
1	Extremely early	Annonay	
3	Early	Burlat	Ludwigs Frühe
5	Mid-season	Merton Glory	Montmorency, Heimanns Rubin
7	Late	Sam, Hedelfinger	Schattenmorelle
9	Extremely late	Hudson, Viola	Marasca types

4.2.3 * Fruit skin colour (UPOV 16)

Ground colour of the skin of fully mature fruits

	<u>Reference</u>
1 Yellow	Dönissens Gelbe
2 Orange red	
3 Vermilion on yellow ground colour	Napoleon, Büttners
4 Vermilion	Montmorency, Ludwigs Frühe
5 Wine red	Schneiders Späte Knorpel, Van
6 Mahogany	Hedelfinger, Sam
7 Black	Knauffs, Schauenburger
8 Other (specify in the NOTES descriptor, 11)	

4.2.4 * Cropping efficiency (productivity)

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

	<u>Reference</u>
3 Low	Köröser
5 Intermediate	Schneiders Späte Knorpel
7 High	Hedelfinger, Schattenmorelle

FURTHER CHARACTERIZATION AND EVALUATION

5. SITE DATA

5.1 COUNTRY OF FURTHER CHARACTERIZATION AND EVALUATION

See 1.13 for coding procedure

5.2 SITE (RESEARCH INSTITUTE)

See 1.14 for coding procedure

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) (UPOV 4)

Natural habit of an untrained, non-juvenile tree

	<u>Reference</u> <u>sweet</u> <u>cherries</u>	<u>Reference</u> <u>sour</u> <u>cherries</u>
3 Upright	Van	Köröser
5 Spreading	Merton Glory, Hedelfinger, Sam	Heimanns Konserven- weichsel
7 Drooping	Jaboulay	Schattenmorelle

6.1.2 Tree vigour (UPOV 3)

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)

	Reference sweet <u>cherries</u>	Reference sour <u>cherries</u>
3 Weak	Tropirichter	Kelleriis 14
5 Medium	Van, Sam	Schattenmorelle
7 Strong	Merton Glory	
9 Extremely strong	Schneiders Späte Knorpel	Köröser

ROOTSTOCKS AND/OR INTERSTOCKS

6.1.3 Suckering tendency

The tendency of the rootstock to produce suckers (adventitious shoots) under normal field conditions

	<u>Reference</u>
0 Absent	Most Mazzards and Mahalebs
3 Low	F 12/1
5 Medium	
7 High	<u>Prunus fruticosa</u>

6.1.4 Scion/rootstock compatibility

With "critical cultivars" e.g. Sam, Van, Moreau.

Based on a 1-9 scale, where:

- 3 Poor
- 5 Intermediate
- 7 Good

6.1.5 Efficiency of mineral uptake

Specify the sampling technique used in the NOTES descriptor, 11

- 3 Poor
- 5 Intermediate
- 7 Good

- 6.1.5.1 Potassium (K)
- 6.1.5.2 Calcium (Ca)
- 6.1.5.3 Magnesium (Mg)

6.1.6 Anchorage

In the soil, of unstaked trees

Reference

3 Poor

5 Intermediate

7 Good

F 12/1, Mazzard

6.1.7 Root regeneration

Reference

3 Poor

5 Intermediate

7 Good

Colt, Oblacinska

6.1.8 Adaptation to soil conditions

6.1.8.1 Adaptation to sandy soil

Reference

3 Poor

5 Intermediate

7 Good

Mahaleb

6.1.8.2 Adaptation to clay soil

Reference

3 Poor

5 Intermediate

7 Good

Mahaleb

P. avium, F 12/1,
Oblacinska

6.1.8.3 Adaptation to calcareous soil

Reference

3 Poor

5 Intermediate

7 Good

Colt

P. avium, F 12/1,
Mahaleb

6.1.9 Adaptation to replanting

Reference

3 Poor

5 Intermediate

7 Good

Colt

6.1.10 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

- 3 Poor
- 5 Intermediate
- 7 Good

6.2 INFLORESCENCE AND FRUIT

Scions grafted on rootstocks or self-rooted

6.2.1 Season of flowering (UPOV 29)

Date of full flowering

	Reference sweet <u>cherries</u>	Reference sour <u>cherries</u>
3 Early	Knauffs, Jaboulay	Stevnsbaer
5 Mid-season	Merton Glory, Burlat	Heimanns Rubin
7 Late	Hedelfinger, Reverchon, Sam	Schattenmorelle
9 Extremely late	Tropfichter	

6.2.2 Self-compatibility of flowers (UPOV 30)

	Reference sweet <u>cherries</u>	Reference sour <u>cherries</u>
0 Self-incompatible	Burlat	Köröser
+ Self-compatible	Stella	Montmorency, Schattenmorelle

6.2.3 Fruit size (UPOV 14)

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

	<u>Reference sweet cherries</u>	<u>Reference sour cherries</u>
1 Extremely small		
3 Small	Früheste der Mark	Stevnsbaer
5 Medium	Early Rivers, Hedelfinger	Morellenfeuer
7 Large	Merton Glory, Van	Schattenmorelle
9 Extremely large	Schneiders Späte Knorpel	Heimanns Rubin

6.2.4 Fruit shape (UPOV 15)

See shape outlines in Fig. 1

	<u>Reference</u>
1 Kidney-shaped	Van, Moreau
2 Flat-round	Burlat, Montmorency
3 Round	Reverchon, Schattenmorelle
4 Elongate	Hedelfinger, Elton
5 Cordate	

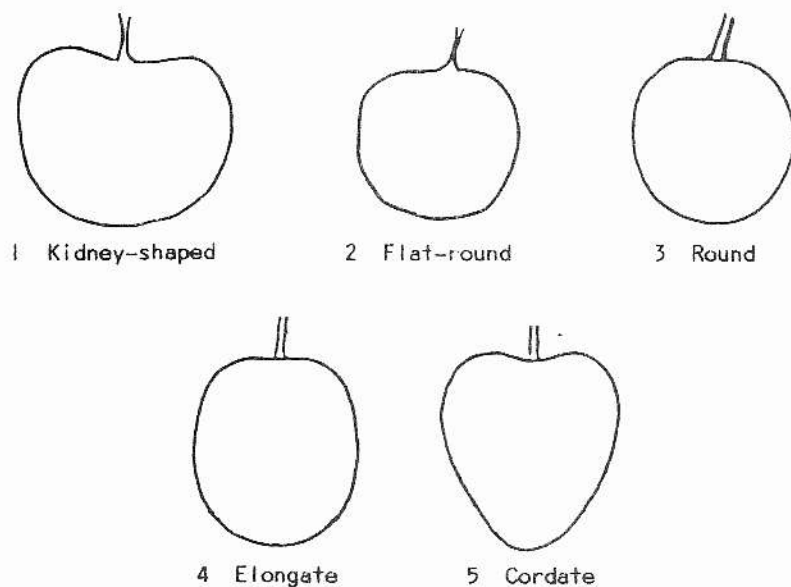


Fig. 1. Fruit shape

6.2.5 Fruit juice colour (UPOV 19)

	<u>Reference</u>
0 Colourless	Napoleon, Montmorency, Ludwigs Frühe
1 Pink	Reverchon, Schneiders Späte Knorpel
2 Red	Sam, Van
3 Purple - dark red	Hedelfinger, Knauffs
4 Black red	Schauenburger, Marasca
5 Other (specify in the NOTES descriptor, 11)	

6.2.6 Fruit flesh colour (UPOV 20)

	<u>Reference</u>
1 Cream-white, cream-yellow	Napoleon
2 Pink	Reverchon, Schneiders Späte Knorpel
3 Red	Van
4 Dark red	Hedelfinger
5 Black red	Schauenburger, Landele
6 Other (specify in the NOTES descriptor, 11)	

6.2.7 Eating quality

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

For dessert cherries

	<u>Reference</u>
1 Extremely poor	
3 Poor	Früheste der Mark
5 Fair	Büttners Rote Knorpel
7 Good	Hedelfinger, Annabella, Sam
9 Extremely good	Schneiders Späte Knorpel, Early Rivers

6.2.8 Taste (UPOV 22)

Sugar/acid ratio

	<u>Reference</u>
1 Extremely acid	Meteor, Marasca, Heimanns Konservenweichsel
3 Acid	Montmorency
5 Intermediate	Hedelfinger, Merton Glory
7 Sweet	Burlat
9 Extremely sweet	Bigarreau d'Or

6.2.9 Firmness of flesh (UPOV 21)

Reference

3	Soft	Merton Glory
5	Intermediate	Annonay, Jaboulay
7	Firm	Hedelfinger, Van

6.2.10 Flesh juiciness (UPOV 23)

Reference

3	Dry	Hedelfinger
5	Intermediate	Early Rivers
7	Juicy	Montmorency, Schattenmorelle

6.2.11 Skin cracking susceptibility

Provide information as to how cracking susceptibility was determined, in the NOTES descriptor 11

Reference

0	Not susceptible	Early Rivers
3	Slightly susceptible	Merton Late, Ulster, Kordia, Schmidt
5	Intermediate	Sam, Napoleon
7	Susceptible	Van, Jaboulay, Büttners
9	Extremely susceptible	Chinook, Bing

6.2.12 Length of fruit stalk (UPOV 25)

Reference

3	Short	Van, Moreau, Heimanns Rubin
5	Intermediate	Sam, Schneiders, Hedelfinger
7	Long	Schauenburger, Annabella, Jaboulay

6.2.13 Leaves on fruit stalk

Reference

0	None	Schattenmorelle
3	Few	
5	Intermediate	
7	Many	Heimanns Rubin

6.2.14 Precocity of bearing

A precocious tree is defined as one which starts to crop at an early age relative to other cultivars or species on the same rootstock

Reference

3	Low precocity	Hedelfinger
5	Intermediate	Moreau
7	High precocity	Van

6.2.15 Susceptibility to pre-harvest fruit drop

Reference

3	Low	
5	Intermediate	
7	High	Basler Adler

6.3 SEED

The stone is the seed plus the stony endocarp of the fruit

6.3.1 Stone size (UPOV 26)

Reference

3	Small	Annonay, Early Rivers
5	Intermediate	Burlat, Hedelfinger, Schattenmorelle
7	Large	Merton Glory, Heimanns Rubin

6.3.2 Stone shape (UPOV 27)

Reference

3	Spherical	Van, Schneiders Späte Knorpel
5	Intermediate	Knauffs
7	Elongate	Hedelfinger

7. STRESS SUSCEPTIBILITY

Scored on a 1-9 scale, where

- 3 Low susceptibility
- 5 Intermediate susceptibility
- 7 High susceptibility

7.1 LOW TEMPERATURE

7.1.1 Low temperature - winter

Additional information concerning type of susceptibility can be recorded in the NOTES descriptor, 11 e.g. minimum temperature without damage; period of hardening, dehardening and rehardening, respectively; difference in bud, wood, and root susceptibility, etc.

7.1.2 Low temperature - spring

Susceptibility of flowers to spring frost

7.2 HIGH TEMPERATURE

7.3 DROUGHT

7.4 HIGH SOIL MOISTURE

8. PEST AND DISEASE SUSCEPTIBILITY

General field susceptibility scored on a 1-9 scale, where

- 3 Low susceptibility
- 5 Intermediate susceptibility
- 7 High susceptibility

When particular species known, record in NOTES descriptor, 11

8.1 PESTS

8.1.1 Rhagoletis spp. cherry fruit fly
 (Rh. cerasi, Rh. fausta,
 Rh. cingulata)

8.1.2 Myzus cerasi etc. aphid species

8.1.3 Etc.

8.2 FUNGI

8.2.1 Coccomyces hiemalis cherry leaf spot

8.2.2	<u>Sclerotinia spp.</u> (<u>S. laxa</u> , <u>S. fructicola</u> <u>S. fructigena</u>)	brown rot, blossom and spur blight, monilia		
		Reference sweet <u>cherries</u>	Reference sour <u>cherries</u>	
	3 Low	Napoleon, Hedelfinger	Oblacinska, Cacak's Rubin	
	5 Intermediate			
	7 High	Dönissens	Schattenmorelle	

8.3 BACTERIA

8.3.1	<u>Pseudomonas spp.</u> (<u>P. morsprunorum</u> , <u>P. syringae</u>)	bacterial canker, blossom blast		
		Reference sweet <u>cherries</u>	Reference sour <u>cherries</u>	
	3 Low	Merton Heart	Schattenmorelle, Oblacinska	
	5 Intermediate			
	7 High	Sam	Heimanns Rubin	
8.3.2	Etc.			

8.4 VIRUS AND MYCOPLASMA

8.4.1 Ring spot viruses

8.4.2 Etc.

9. ALLOENZYME COMPOSITION

This may prove to be a useful tool for identifying duplicate accessions

10. CYTOLOGICAL CHARACTERS AND IDENTIFIED GENES

11. * NOTES

Give additional information where descriptor state is noted as 'Other' as, for example, in descriptors 2.10 and 4.1.1.8. Also include here any further relevant information

APPENDIX I

SUMMARY OF BASIC CEC CHERRY DESCRIPTORS

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