INTERNATIONAL BOARD FOR PLANT GENETIC RESOURCES

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

DESCRIPTOR LIST FOR PLUM AND ALLIED SPECIES

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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.
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.

IBPGR Executive Secretariat
Crop Genetic Resources Centre
Plant Production and Protection Division
Food and Agriculture Organization of the United Nations
Via delle Terme di Caracalla, 00100 Rome, Italy
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The plum 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 PLUM

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 the NOTES descriptor, 11);
e) when the descriptor is inapplicable, 'O' is used as the descriptor value. For example, if an accession does not form flowers, a 'O' 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. The terminal fruits should be excluded. The fruits should be examined at peak maturity, if necessary, after storage in air at the optimum commercial temperature.
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 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 Plum Descriptors
1.5 SCIENTIFIC NAME (Use *Prunus domestica* for the cultivated European plum and prune)

1.5.1 *Genus* (e.g. *Prunus*)
1.5.2 *Species* (e.g. *domestica*)
1.5.3 *Subspecies* (if applicable) (e.g. *italica*)
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. Infraspecific 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 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. Santa Rosa

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. Late Santa Rosa.

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.
3. SITE DATA

3.1 COUNTRY OF CHARACTERIZATION AND PRELIMINARY EVALUATION

See 1.13 for code

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 *Chromosome number
4.2 INFLORESCENCE AND FRUIT

4.2.1 *Season of flowering
Date of beginning of flowering

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Extremely early</td>
<td>South China group,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Hua-la-li</td>
</tr>
<tr>
<td>2</td>
<td>Very early</td>
<td>President, Mariposa</td>
</tr>
<tr>
<td>3</td>
<td>Early</td>
<td>Ruth Gerstetter, Frontier</td>
</tr>
<tr>
<td>5</td>
<td>Intermediate</td>
<td>California Blue,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Morettini 355</td>
</tr>
<tr>
<td>7</td>
<td>Late</td>
<td>Anna Späth, Laroda</td>
</tr>
<tr>
<td>9</td>
<td>Extremely late</td>
<td>Italia, Simka</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Extremely early</td>
<td>Ping-ti-li</td>
</tr>
<tr>
<td>2</td>
<td>Very early</td>
<td>Ruth Gerstetter, Red Beaut</td>
</tr>
<tr>
<td>3</td>
<td>Early</td>
<td>Precoce di Ersinger, Shiro</td>
</tr>
<tr>
<td>5</td>
<td>Mid-season</td>
<td>Sugar, Burbank</td>
</tr>
<tr>
<td>7</td>
<td>Late</td>
<td>Stanley Laroda</td>
</tr>
<tr>
<td>9</td>
<td>Extremely late</td>
<td>President, Casselman</td>
</tr>
</tbody>
</table>

4.2.3 *Flesh colour

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Green</td>
<td>Ruth Gerstetter</td>
</tr>
<tr>
<td>2</td>
<td>Light green</td>
<td>Anna Späth, Nubiana</td>
</tr>
<tr>
<td>3</td>
<td>Yellow-green</td>
<td>Gilbert, Queen Rosa</td>
</tr>
<tr>
<td>4</td>
<td>Light yellow</td>
<td>Regina d'Italia, Burbank</td>
</tr>
<tr>
<td>5</td>
<td>Yellow</td>
<td>California Blue</td>
</tr>
<tr>
<td>6</td>
<td>Amber</td>
<td>Late S. Rosa</td>
</tr>
<tr>
<td>7</td>
<td>Light orange</td>
<td>Laroda</td>
</tr>
<tr>
<td>8</td>
<td>Orange</td>
<td>Redheart</td>
</tr>
</tbody>
</table>

4.2.4 Skin bloom

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Poor</td>
<td>Imperial Epineuse, Sorriso di Primavera</td>
</tr>
<tr>
<td>5</td>
<td>Medium</td>
<td>Ente GF 707, Ozark Premier</td>
</tr>
<tr>
<td>7</td>
<td>High</td>
<td>Bluefre, Allo</td>
</tr>
</tbody>
</table>
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

<table>
<thead>
<tr>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>5</td>
</tr>
<tr>
<td>7</td>
</tr>
<tr>
<td>9</td>
</tr>
</tbody>
</table>

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)

<table>
<thead>
<tr>
<th>Reference</th>
</tr>
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<tbody>
<tr>
<td>1</td>
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<tr>
<td>3</td>
</tr>
<tr>
<td>5</td>
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<tr>
<td>7</td>
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<tr>
<td>9</td>
</tr>
<tr>
<td></td>
</tr>
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<td></td>
</tr>
</tbody>
</table>
6.1.3 *Tree chilling requirement

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

- Low requirement
- Moderate requirement
- High requirement

6.1.4 Coloration of shoot tip

Coloration on young shoots (10-15 cm. long) in springtime

<table>
<thead>
<tr>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>S. Rosa</td>
</tr>
<tr>
<td>Prunus Marianna, Myrobalan B</td>
</tr>
<tr>
<td>Coscia di Monaca</td>
</tr>
<tr>
<td>Czar</td>
</tr>
<tr>
<td>Burbank, S. Julien A</td>
</tr>
<tr>
<td>Giant, Methley</td>
</tr>
<tr>
<td>Florentia, Ackermann</td>
</tr>
<tr>
<td>Anna Späth, Shiro</td>
</tr>
<tr>
<td>Prugna d'Ungheria, Elephant Heart</td>
</tr>
</tbody>
</table>

ROOTSTOCK

6.1.5 *Suckering tendency

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

<table>
<thead>
<tr>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marianna GF 8-1</td>
</tr>
<tr>
<td>Brompton</td>
</tr>
<tr>
<td>S. Julien A</td>
</tr>
<tr>
<td>GF 43</td>
</tr>
<tr>
<td>S. Julien GF 655-2</td>
</tr>
<tr>
<td>Damas GF 1869</td>
</tr>
</tbody>
</table>

6.1.6 *Dwarfing

Direct growth controlling effect of the rootstock on the cultivar

<table>
<thead>
<tr>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marianna GF 8-1</td>
</tr>
<tr>
<td>S. Julien A</td>
</tr>
<tr>
<td>S. Julien GF 655-2</td>
</tr>
</tbody>
</table>
6.1.7. **Yield efficiency**

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

**Reference**

3 Poor  
5 Intermediate  
7 Good

Brompton  
Myrobalan B  
Marianna GF 8-1

6.1.8 **Best method of propagation**

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

6.1.9 **Scion/rootstock compatibility**

The compatibility of a scion accession on the rootstock (named in 5.4 or on one of the following rootstocks)

Based on a 1-9, where

3 Poor  
5 Intermediate  
7 Good

6.1.9.1 On the rootstock named in 5.4  
6.1.9.2 GF 43 (*P. domestica*)  
6.1.9.3 Brompton (*P. domestica*)  
6.1.9.4 Damas GF 1869 (*P. insititia*)  
6.1.9.5 S. Julien A (*P. insititia*)  
6.1.9.6 S. Julien GF 655-2 (*P. insititia*)  
6.1.9.7 Myrobalan B (*P. cerasifera*)  
6.1.9.8 Marianna GF 8-1 (*P. marianna*)
6.2 INFLORESCENCE AND FRUIT

SCIONS GRAFTED ON ROOTSTOCKS OR SELF-ROOTED

6.2.1 Flower size

<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Small</td>
<td>Pershore, Florentia</td>
</tr>
<tr>
<td>5</td>
<td>Medium</td>
<td>Czar, Burbank</td>
</tr>
<tr>
<td>7</td>
<td>Large</td>
<td>Anna Späth</td>
</tr>
</tbody>
</table>

6.2.2 Self-fertility of flowers

<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Extremely poor</td>
<td>President, Early Golden</td>
</tr>
<tr>
<td>3</td>
<td>Poor</td>
<td>Agen, S. Rosa</td>
</tr>
<tr>
<td>5</td>
<td>Intermediate</td>
<td>Bluefre</td>
</tr>
<tr>
<td>7</td>
<td>Good</td>
<td>Lincoln, Premier</td>
</tr>
<tr>
<td>9</td>
<td>Extremely good</td>
<td>Tuleu Gras, Pozegaca</td>
</tr>
</tbody>
</table>

6.2.3 Bearing habit

Predominant distribution of flower buds

<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>On spurs</td>
<td>Stanley, Pozegaca</td>
</tr>
<tr>
<td>2</td>
<td>On spurs and on one-year old shoots</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>On one-year old shoots</td>
<td></td>
</tr>
</tbody>
</table>

6.2.4 Cropping efficiency (Productivity)

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

<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Extremely low</td>
<td>Gilbert, S. Rosa</td>
</tr>
<tr>
<td>3</td>
<td>Low</td>
<td>Ruth Gerstetter, Sorriso di Primavera</td>
</tr>
<tr>
<td>5</td>
<td>Intermediate</td>
<td>Oneida, Shiro</td>
</tr>
<tr>
<td>7</td>
<td>High</td>
<td>Agen, Ozark Premier</td>
</tr>
<tr>
<td>8</td>
<td>Very high</td>
<td>Stanley, Burbank</td>
</tr>
<tr>
<td>9</td>
<td>Extremely high</td>
<td>Obilnaja, Pozegaca</td>
</tr>
</tbody>
</table>
6.2.5 *Fruit size*

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

<table>
<thead>
<tr>
<th></th>
<th>Fruit size</th>
<th>Weight Range</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Extremely small</td>
<td>(&lt; 30 g)</td>
<td>Pozegaca</td>
</tr>
<tr>
<td>2</td>
<td>Very small</td>
<td>(30-40 g)</td>
<td>French Improved, Early Golden</td>
</tr>
<tr>
<td>3</td>
<td>Small</td>
<td>(41-50 g)</td>
<td>Gilbert, Sorriso di Primavera Sugar, Premier</td>
</tr>
<tr>
<td>4</td>
<td>Small/medium</td>
<td>(51-55 g)</td>
<td>California Blue, Red Beaut</td>
</tr>
<tr>
<td>5</td>
<td>Medium</td>
<td>(56-65 g)</td>
<td>Bluefre, Laroda</td>
</tr>
<tr>
<td>6</td>
<td>Medium/large</td>
<td>(66-70 g)</td>
<td>Oneida, Late S. Rosa</td>
</tr>
<tr>
<td>7</td>
<td>Large</td>
<td>(71-80 g)</td>
<td>Yakima, Queen Rosa</td>
</tr>
<tr>
<td>8</td>
<td>Very large</td>
<td>(81-90 g)</td>
<td>Calita</td>
</tr>
<tr>
<td>9</td>
<td>Extremely large</td>
<td>(&gt; 90 g)</td>
<td></td>
</tr>
</tbody>
</table>

6.2.6 **Fruit shape (frontal view)**

See shape outlines in Figure 1

<table>
<thead>
<tr>
<th></th>
<th>Shape</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Rounded flat</td>
<td>Friar</td>
</tr>
<tr>
<td>2</td>
<td>Rounded</td>
<td>California Blue, Shiro</td>
</tr>
<tr>
<td>3</td>
<td>Elliptic</td>
<td>President, Ozark Premier</td>
</tr>
<tr>
<td>4</td>
<td>Ovate</td>
<td>Giant</td>
</tr>
<tr>
<td>5</td>
<td>Heart shape</td>
<td>Morettini 355</td>
</tr>
<tr>
<td>6</td>
<td>Oblong</td>
<td>Prugna d'Ungheria</td>
</tr>
</tbody>
</table>

6.2.7 **Fruit attractiveness**

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

<table>
<thead>
<tr>
<th></th>
<th>Attractiveness</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Extremely poor</td>
<td>Eldorado, Wickson</td>
</tr>
<tr>
<td>2</td>
<td>Poor</td>
<td>Regina Claudia, Burbank</td>
</tr>
<tr>
<td>3</td>
<td>Fair</td>
<td>Stanley, Ozark Premier</td>
</tr>
<tr>
<td>4</td>
<td>Good</td>
<td>Bluefre, Shiro</td>
</tr>
<tr>
<td>5</td>
<td>Excellent</td>
<td>President, Calita</td>
</tr>
</tbody>
</table>

6.2.8 **Ground colour**

Ground colour of the skin of fully mature fruit

<table>
<thead>
<tr>
<th></th>
<th>Colour</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Green</td>
<td>Regina Claudia Verde, Burbank</td>
</tr>
<tr>
<td>2</td>
<td>Light green</td>
<td>Yakima, Burmosa</td>
</tr>
<tr>
<td>3</td>
<td>Light yellow</td>
<td>Shiro</td>
</tr>
<tr>
<td>4</td>
<td>Yellow</td>
<td>Giant, Sorriso di Primavera Early Golden</td>
</tr>
</tbody>
</table>
Figure 1. Fruit shape (frontal view)

6.2.9 Over colour

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

Reference

| 1   | Pink       | Early Golden |
| 2   | Red        | Burbank      |
| 3   | Red - violet | Ente GF 707, |
|     |            | Morettini 355 |
|     |            | Imperial Epineuse, |
|     |            | Frontier      |
| 4   | Violet     | Gilbert,      |
|     |            | Bluefre       |
| 5   | Dark violet | Yakima, Simka |
| 6   | Blue       | Friar         |
| 7   | Dark blue  |              |
| 8   | Black      |              |
6.2.10 **Eating quality**

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

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Extremely poor</td>
</tr>
<tr>
<td>3</td>
<td>Poor</td>
</tr>
<tr>
<td>5</td>
<td>Fair</td>
</tr>
<tr>
<td>7</td>
<td>Good</td>
</tr>
<tr>
<td>9</td>
<td>Excellent</td>
</tr>
</tbody>
</table>

**Reference**

Gilbert, Pobeda
President, Morettini 355
Regina Claudia,
Ozark Premier
Ente GF 707, Burbank
Reine Claude, S. Rosa

6.2.11 **Firmness of flesh** (when fully ripe)

**Reference**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Extremely soft</td>
</tr>
<tr>
<td>3</td>
<td>Soft</td>
</tr>
<tr>
<td>5</td>
<td>Medium</td>
</tr>
<tr>
<td>7</td>
<td>Firm</td>
</tr>
<tr>
<td>9</td>
<td>Extremely firm</td>
</tr>
</tbody>
</table>

Bella di Lovanio,
Early Golden
Ontario, Beauty
Giant, Red Beaut
Bluefre, Nubiana
Oneida, Frontier

6.2.12 **Texture**

The texture of the flesh of the fruit when ripe

**Reference**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Extremely coarse</td>
</tr>
<tr>
<td>3</td>
<td>Coarse</td>
</tr>
<tr>
<td>5</td>
<td>Intermediate</td>
</tr>
<tr>
<td>7</td>
<td>Fine</td>
</tr>
<tr>
<td>9</td>
<td>Extremely fine</td>
</tr>
</tbody>
</table>

Grand Prix,
Lincoln, Frontier
Imperial Epineuse,
Burbank
Anna Späth, Late S. Rosa
Burmosa

6.2.13 **Skin cracking susceptibility**

**Reference**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Extremely low</td>
</tr>
<tr>
<td>3</td>
<td>Low</td>
</tr>
<tr>
<td>5</td>
<td>Medium</td>
</tr>
<tr>
<td>7</td>
<td>High</td>
</tr>
<tr>
<td>9</td>
<td>Extremely high</td>
</tr>
</tbody>
</table>

Bluefre, S. Rosa
Sugar
Stanley, Eldorado
Imperial Epineuse,
Redheart
Premier, Nubiana

6.3 **STONE**

6.3.1 **Stone size**

**Reference**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Extremely small</td>
</tr>
<tr>
<td>3</td>
<td>Small</td>
</tr>
<tr>
<td>5</td>
<td>Medium</td>
</tr>
<tr>
<td>9</td>
<td>Extremely large</td>
</tr>
</tbody>
</table>

Bilska Rana, Obilnaja
Agen, Early Golden
Bluefre, Shiro
Bella di Lovanio,
Ozark Premier
6.3.2 **Stone shape (lateral view)**

See Figure 2

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Rounded flat</td>
</tr>
<tr>
<td>2</td>
<td>Rounded</td>
</tr>
<tr>
<td>5</td>
<td>Ovate</td>
</tr>
<tr>
<td>9</td>
<td>Elongated</td>
</tr>
</tbody>
</table>

Reference

- South China group,  
- Ling-ti-li  
- Laxton's Goldfinch,  
- Burbank  
- President,  
- Sorriso di Primavera

---

Figure 2. Stone shape (lateral view)

6.3.3 **Stone adherence to flesh of fully ripe fruit**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Free</td>
</tr>
<tr>
<td>5</td>
<td>Semi-clinging</td>
</tr>
<tr>
<td>7</td>
<td>Clinging</td>
</tr>
</tbody>
</table>

Reference

- President, Friar  
- Bluefre, Frontier  
- Favorita del Sultano,  
- Sorriso di Primavera
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** - late autumn/early winter

7.1.2 **Low temperature** - mid-winter

7.1.3 **Low temperature** - spring

Especially at critical stages in relation to flowering

7.2 **HIGH TEMPERATURE**

7.3 **DROUGHT**

7.4 **HIGH SOIL MOISTURE**

7.5 **CHLOROSIS**

Induced by high lime content of the soil

8. **PEST AND DISEASE SUSCEPTIBILITY**

Based on 1–9 scale of general field susceptibility, where

3. Low susceptibility  
5. Medium susceptibility  
7. High susceptibility

If the race is known record in NOTES descriptor, 11

8.1 **PESTS**

8.1.1 **Hoplocampa flava** - plum sawfly

8.1.2 etc.
8.2 FUNGI

8.2.1 Monilinia laxa  brown rot on flowers

Reference

1 Italia, Burmosa
3 Ente, Shiro
5 President,
7 Sorriso di Primavera
9 Hachman, Laroda
9 Yakima, Redheart

8.2.2 Monilinia fructigena  brown rot on fruits

Reference

1 Pozegaca, Methley
3 President, Shiro
5 Stanley
7 Ente
9 Imperial, Utility

8.2.3 Transchelia (Puccinia) pruni-spinosa  rust on plum

Reference

3 Anna Späth, Laroda
5 President, S. Rosa
7 Yakima, Simka

8.2.4 Coryneum beijerinckii  shot - hole

Reference

1 Stanley, Shiro
3 Sugar, Simka
5 Oneida, Morettini 355
7 Bluefre, S. Rosa
9 Anna Späth, Burmosa

8.2.5 Stereum purpureum  silver leaf disease

8.2.6 etc.
8.3 BACTERIA

8.3.1 Xanthomonas pruni
bacterial canker

Reference

Lincoln,
Sorriso di Primavera
Utility, Shiro
President,
Starking Delicious
Stanley, Laroda
Bluefre, Calita

8.3.2 etc.

8.4 VIRUS AND MYCOPLASMA

8.4.1 Plum pox
prunus virus 7

Reference

Cacak's beauty
Stanley
Ente
Pozegaca

8.4.2 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 descriptor (e.g. 2.10). Also include here further relevant information (where necessary)
SUMMARY OF BASIC CEC PLUM DESCRIPTORS

PASSPORT

1. ACCESSION DATA
   1.4 OTHER NUMBERS ASSOCIATED WITH
      THE ACCESSION
      1.4.1 *EC number
   1.5 SCIENTIFIC NAME
      1.5.1 *Genus
      1.5.2 *Species
      1.5.3 *Subspecies
   1.6 PEDIGREE OF ACCESSION
      1.6.1 *Female parent
      1.6.2 *Male parent
   1.12 *GENETIC ORIGIN
   1.13 *COUNTRY WHERE MAINTAINED
   1.14 *SITE WHERE MAINTAINED
   1.16 *LOCAL NAME
   1.17 *LOCAL CLONE/MUTANT/VARIANT NAME
   1.22 *GENETIC NAME
   1.23 *GRS CLONE/MUTANT/VARIANT NAME

2. COLLECTION DATA
   2.4 *COUNTRY OF COLLECTION OR COUNTRY
      WHERE CULTIVAR/VARIETY BRED
   2.18 *VIRUS DISEASE STATUS
   2.19 *END USE, GENERAL
   2.20 *FRUIT USE
   2.21 *PLANT USE

* Basic E.C. Plum Descriptors
CHARACTERIZATION AND PRELIMINARY EVALUATION DATA

3. SITE DATA

4. PLANT DATA

4.1 VEGETATIVE

4.1.1 *Propagation method

4.1.2 *Chromosome number

4.2 INFLORESCENCE AND FRUIT

4.2.1 *Season of flowering

4.2.2 *Harvest maturity

4.2.3 *Flesh colour

FURTHER CHARACTERIZATION AND EVALUATION

5. SITE DATA

6. PLANT DATA

6.1 VEGETATIVE

6.1.3 *Tree chilling requirement

6.1.5 *Suckering tendency

6.1.6 *Dwarfing

6.2 INFLORESCENCE AND FRUIT

6.2.3 *Bearing habit

6.2.5 *Fruit size

7. STRESS SUSCEPTIBILITY

8. PEST AND DISEASE SUSCEPTIBILITY

9. ALLOENZYME COMPOSITION

10. CYTOLOGICAL CHARACTERS AND IDENTIFIED GENES

11. *NOTES

* Basic E.C. Plum Descriptors
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